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TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1883.

No. 250.

LOUIS McMURRAY, EDWARD M. LANG, AND GEORGE BURNHAM, Junior, APPELLANTS,

vs.

DWIGHT D. MALLORY AND JESSE C. LUDDINGTON.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF MARYLAND.

FILED MAY 14, 1881.

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1 THE UNITED STATES OF AMERICA, } *to wit:*
District of Maryland, }

At a circuit court of the United States for the fourth circuit in and for the district of Maryland, begun and held at the city of Baltimore on the first Monday of November, being the first day of the same month, in the year of our Lord one thousand eight hundred and eighty.

Present: The Honorable Hugh L. Bond, circuit judge; Thomas J. Morris, judge Maryland Dist.; Archibald Sterling, Jr., esquire, attorney; John M. McClintock, esquire, marshal; James W. Chew, clerk.

Among other were the following proceedings, to wit:

LOUIS McMURRAY, EDWARD M. LANG, and GEORGE BURNHAM, JR., trading as McMurray, Lang & Burnham,
vs.
DWIGHT D. MALLORY and JESSE C. LUDDINGTON, trading as D. D. Mallory & Co.

2 *Bill of Complaint.—Filed 2d September*, 1879.

To the Honorable the Justices of the United States Circuit Court for the Fourth Circuit within and for the District of Maryland.

The bill of complaint of Louis McMurray, Edward M. Lang, and George Burnham, Jr., trading under the name, firm, and style of McMurray, Lang & Burnham, of the city [of] Baltimore and State of Maryland, and citizens of the United States, bring this, their bill of complaint, against Dwight D. Mallory and Jesse C. Luddington, trading as D. D. Mallory & Co., of the city of Baltimore and State of Maryland.

And thereupon your orators complain and say that heretofore and before the 17th day of May, 1870, one Abel Barker, of Wyoming, Pennsylvania, being then a citizen of the United States, was the true, original, and first inventor and discoverer of a certain new and useful invention, to wit: an "Improvement in Soldering Devices;" that said invention was not known or used by others before his invention or discovery thereof, and was not in public use or on sale in this country more than two years before his application for letters patent therefor.

3 That being the inventor and discoverer of said "Improvement in Soldering Devices," the said Abel Barker made application in writing to the Commissioner of Patents of the United States, praying that letters patent of the United States be granted to him for said invention, and accompanied his application with a written description of said invention and discovery, and the manner and process of making the same, and made oath that he verily believed that he was the original and first inventor or discoverer of said "Improvement in Soldering Devices," for which he solicited letters patent, and that he then was a citizen of the United States.

And your orators further allege and show to your honors, that the said Able Barker did, in all other respects comply with all the requirements of law, and the statutes of the United States in such cases made and provided, and letters patent of the United States were duly issued to him, the said Able Barker, on the 17th day of May, 1870, for an "Improvement in Soldering Devices," and were numbered 103,125, wherein were granted unto the said Abel Barker, his heirs, executors, administrators, and assigns, for the term of seventeen years from the said 17th day of May, 1870, the full and exclusive right to make, use, and vend the said invention throughout the United States and the territories thereof. And said letters patent were issued in the name of the United States of America, were sealed with the seal of the Patent Office of the United States, were signed by the Secretary of the Interior, and countersigned by the Commissioner of Patents, and all the requirements of law, and of the statutes of the United States were duly complied with.

And your orators further show that the said Abel Barker put his said invention into use, and upon application to the Commissioner of Patents by the said Abel Barker, and having complied with all the requirements of law, and for good and lawful cause surrendered said letters patent to the Commissioner of Patents, and having made due application for new letters patent for the same invention,
4 for the residue of said term of seventeen years, did, on the eleventh day of January, 1876, obtain new letters patent, which were on that day issued to said Abel Barker and Edward M. Lang, of Portland, Maine, as applied for as aforesaid, which said last-mentioned letters patent were issued in due form of law, under the seal of the Patent Office of the United States, were signed by the Secretary of the Interior, and countersigned by the Commissioner of Patents, were dated the day and year last aforesaid, and were numbered No. 6846, as by the said last-mentioned letters patent, or a duly authenticated copy thereof, now in your orators possession and ready to be produced, will fully appear.

And your orators further allege and say that the said Abel Barker having assigned all his right, title, and interest in the said last mentioned letters patent to Edward M. Lang, of Portland, Maine, did for good and lawful cause, and with the consent and concurrence of the said Edward M. Lang, surrender said last mentioned letters patent, and made due application to the Commissioner of Patents for new letters patent for the same invention, for the residue of said term of seventeen years, and having in all things complied with the act of Congress in such case made and provided, new letters patent were issued to said Edward M. Lang, assignee of said Abel Barker, for said invention, bearing date the first day of July, 1879, which said last mentioned letters patent were issued in due form of law under the seal of the Patent Office of the United States, were signed by the Acting Secretary of the Interior, and were countersigned by the Commissioner of Patents, and are numbered 8781, as by said last-mentioned letters patent, or a duly authenticated copy thereof, now

in your orator's possession and ready to be produced, will more fully appear, and which when produced your orators pray may be taken as part of this bill of complaint.

And your orators further allege and say that the said Edward
5 M. Lang did by assignment bearing date the fourteenth day of August, in the year A. D. 1879, sell, assign, and convey unto Louis McMurray, Edward M. Lang, and George Burnham, Jr., trading under the name, firm, and style of McMurray, Lang & Burnham, of the city of Baltimore, as aforesaid, all the right, title, and interest of him, the said Edward M. Lang, in and to the said last-mentioned re-issued letters patent, which said assignment was duly recorded in the Patent Office of the United States, among the transfers of patents, all of which will more fully appear by the said assignment, or to a duly authenticated copy thereof in your orator's possession, and ready to be produced, and when produced your orators pray may be taken as part of this bill of complaint.

And your orators further allege and show unto your honors that one Jabez A. Bostwick, of New York, was, on or before the 21st day of June, 1870, the true, original, and first inventor of a new and useful "Improvement in Soldering Irons," not known or used before, and not on sale or in public use for more than two years prior to the date of his application for letters patent therefor. And the said Jabez A. Bostwick being the inventor of said improvements, and a citizen of the United States, made application to the proper department of the Government of the United States for letters patent, in accordance with the then existing laws of the United States, and having duly complied, in all respects, with the conditions and requirements of said laws, on the 21st day of June, 1870, latters patent of the United States, No. 104,412, signed, sealed, and executed in due form of law, for his said invention or discovery, entitled an "Improvement in Soldering Irons," were issued to the said Jabez A. Bostwick, wherein there was secured to him, his heirs, executors, and assigns for the term of seventeen years from the said twenty-first day of June, eighteen hundred and seventy, the full and exclusive right of making, using, and selling said invention throughout the United States and the territories thereof.

6 And your orators further show that a description or specification of the aforesaid improvement was given in the schedule to the aforesaid letters patent annexed, accompanied by certain drawings referred to in said schedule, and forming part of said letters patent, which were duly recorded in the Patent Office of the United States, and which, or an exemplified copy of which, your orators will produce as your honors may direct.

And your orators further allege and show unto your honors that the said Jabez A. Bostwick, having assigned all his right, title, and interest in and to said last-mentioned letters patent to the firm of E. M. Lang & Co., of Portland, Maine, which said firm was composed of the said Edward M. Lang and George Burnham, Jr., did for good and lawful cause, and with the consent and allowance of the said

E. M. Lang & Co., surrender the said letters patent to the Commissioner of Patents, and having made due application for new letters patent, for the same invention, for the residue of said term of seventeen years, and having in all things complied with the laws and the act of Congress in such case made and provided, did on the 29th day of October, in the year eighteen hundred and seventy-eight, obtain said new letters patent, as applied for as aforesaid, which said last-mentioned re-issued letters patent were issued in due form of law to the said E. M. Lang & Co., under the seal of the Patent Office of the United States, signed by the Acting Secretary of the Interior and countersigned by the Acting Commissioner of Patents, and bear date the day and year last aforesaid, and are numbered 8466, as by the said last-mentioned re-issued letters patent will more fully appear, to which or to a duly authenticated copy thereof now in your orators' possession, and ready to be produced, your orators beg leave to refer, and which when produced, pray may be taken as part of this bill of complaint.

And your orators further show that a description or specification of the aforesaid improvement was given in the schedule, to
7 said last-mentioned re-issued letters patent annexed, accompanied by certain drawings referred to in said last-mentioned schedule, and forming a part of said re-issued letters patent.

And your orators further allege and show unto your honors, that the said E. M. Lang & Co., did by assignment bearing date the 14th day of August, A. D. 1879, sell, assign, and convey unto Louis McMurray, Edward M. Lang, and George Burnham, Jr., the complainants in this cause, trading under the name, firm, and style of McMurray, Lang & Burnham, of the city of Baltimore and the State of Maryland, all the right, title, and interest of the said E. M. Lang & Co., in and to said last-mentioned re-issued letters patent, which said assignment was duly recorded in the Patent Office of the United States, among the transfers of patents, all of which will more fully appear by reference to said assignment, or to a duly authenticated copy thereof, now in your orators possession, and ready to be produced, and which, when produced, your orators pray may be taken as part of this bill of complaint.

And your orators further show unto your honors, that the said inventions described and claimed in the said re-issued letters patent of July 1st, 1879, No. 8781, for an "Improvement in Soldering Devices," and the said re-issued letters patent, dated the 29th day of October, 1878, for an "Improvement in Soldering Irons," number 8466, have been extensively applied to practical use since the aforesaid assignments, and before, and the said re-issued letters patent belong to, and are the exclusive property of the said McMurray, Lang, and Burnham, the complainants herein, and but for the infringements hereinafter complained of, and infringements by others, your orators would still be in the undisturbed possession, use, and enjoyment of the exclusive privileges secured by said letters patent, and in receipt of the profits and emoluments accruing therefrom.

And your orators further allege and show unto your honors that said defendants, the said Dwight D. Mallory and Jesse Luddington,
8 trading as D. D. Mallory & Co., well knowing the premises, and the rights, and the privileges secured unto your orators, and, in order to deprive your orators of the profits, benefits, and advantages which might and otherwise would have accrued to them; as your orators are informed and believe, without the license of your orators and against their will, and in violation of their rights, ever since the said 14th day of August, 1879, and continually thence hitherto, have made, sold, and used, or caused to be made, sold, and used, and intend to continue still to make, sell, and use the devices, improvements, and inventions contained in said letters patent so as aforesaid, the property of your orators, within the District of Maryland, and refuse to pay to your orators any of the profits which they have made by such unlawful sale, manufacture, or use, or to desist from the further infringement of said letters patent; and said defendants have derived and received, and are still deriving and receiving large gains and profits from the manufacture, use, and sale of soldering devices and soldering irons containing the improvements and combinations described and claimed in said letters patent, but to what amount your orators do not know and cannot set forth, all of which acts and doings are in violation of the exclusive rights and privileges, so as aforesaid vested in your orators, under and by virtue of said recited several letters patent and assignments, and are contrary to equity and good conscience, to the manifest injury to your orator in the premises.

To the end, therefore, that the said defendants may, if they can, show why your orators should not have the relief hereby prayed, and may upon their several and respective corporal oaths, and according to the best and utmost of their several and respective knowledge, remembrance, information, and belief, full, true, direct, and perfect answer make to such of the several interrogatories hereinafter numbered and set forth, as by note hereunder written they are required to answer, that is to say:

9 1. Whether the said original letters patent No. 103,125, hereinbefore mentioned, were granted and issued to said Abel Barker as aforesaid.

2. Whether the said original letters patent were surrendered and new letters patent reissue No. 6846 were granted and issued to said Abel Barker and Edward M. Lang as aforesaid.

3. Whether said last-mentioned letters patent were surrendered and new letters patent re-issue No. 8781 were granted to said Edward M. Lang as aforesaid.

4. Whether said original letters patent No. 104,412, hereinbefore mentioned, were granted and issued to Jabez A. Bostwick as aforesaid.

5. Whether the said original letters patent No. 104,412 were surrendered and new letters patent reissue No. 8466 were issued and granted to E. M. Lang & Co. as aforesaid.

6. Whether the said Edward M. Lang and E. M. Lang & Co. did assign all their respective right, title, and interest in and to the said re-issued letters patent No. 8781 and No. 8466 to the complainants as aforesaid.

7. Whether the said defendants, since the 14th day of August, 1879, have made, used, or sold any, and how many, soldering irons or devices constructed in whole or in part upon the principles and in the manner described in said reissued letters patent No. 8781 and 8466 as aforesaid.

8. Whether said defendants have used in their business, or by their agents and employees have soldered any cans, and how many, since the 14th day of August, 1879, by using soldering tools, irons or devices constructed in whole or in part on the principles and in the manner described in said re-issued letters patent No. 8781 and 8466 as aforesaid.

And that said defendants may answer the premises, and that they may be decreed to account for and pay over the income and profits thus unlawfully derived, or which might have been derived, from the violation of the rights of your orators as aforesaid.

10 And your orators further pray, that upon entering of the decree in favor of your orators against said defendants, for infringement as above prayed for, your honors may also proceed to assess, or caused to be assessed, under your directions, as well, the profits to be derived therefrom to be accounted for as aforesaid, as also in addition thereto the damages your orators have sustained thereby, and that said defendants may be restrained from further violation of the rights of your orators in the premises, and may also be ordered and decreed to pay the costs of this suit, and to deliver up to be destroyed all such tools, devices, and irons, containing said patented improvements, and that your orators may have such other and further relief as the equity of their case may require.

May it please your honors to grant unto your orators the writ of injunction against said Dwight D. Mallory and Jesse C. Luddington, the defendants as aforesaid, issuing out of and under the seal of this honorable court, perpetually enjoining and restraining them, their attorneys, clerks, agents, and workmen from any further manufacture, sale, or use of said patented improvements, severally or jointly, or in any manner whatsoever in violation of the rights of your orators as aforesaid.

May it please your honors also to grant unto your orators the writ of subpœna, under the seal of this court, directed to said Dwight D. Mallory and Jesse C. Luddington, commanding them to be and appear in this honorable court, on a certain day therein to be named, to answer the premises, and to abide by and perform such order or decree as may be passed herein.

And as in duty bound, &c.

BENJ. PRICE,
Solicitor for Complainants.

NOTE.—The defendants are required to answer each of the foregoing interrogatories, from 1 to 8, inclusive.

11 UNITED STATES OF AMERICA, } *to wit:*
District of Maryland, }

On this 26th day of August, 1879, before the subscriber, a commissioner of the United States, in and for the State of Maryland, personally appeared Louis McMurray, one of the complainants in the foregoing bill named, and being duly sworn, makes oath that so far as the statements therein contained are within his own knowledge, they are true, and so far as they are derived from the information of others, he believes them to be true.

ROBT. LYON ROGERS,
U. S. Commissioner for Maryland.

12 *Subpœna.*

THE UNITED STATES OF AMERICA, } *to wit:*
District of Maryland, }

To Dwight D. Mallory and Jesse C. Luddington, Greeting:

[Seal of Cir. Court.] You are hereby commanded that all excuses and delays set aside you be and appear at the clerk's office of the circuit court of the United States for the fourth circuit in and for the District of Maryland, on the first Monday in October next, to answer unto the bill of complaint of Louis McMurray, Edward M. Lang, and George Burnham, Jr., in said court exhibited against you. Hereof you are not to fail at your peril, and have you then and there this writ.

Witness the Honorable Morrison R. Waite, Chief Justice of our Supreme Court, the 2d day of September, in the year of our Lord 1879. Issued 2d day of September, 1879.

JAS. W. CHEW, *Clerk.*

Mem: The deft's are required to enter their appearance in the clerk's office on or before the first Monday in Octo.; otherwise the bill may be taken *pro confesso.*

13 On the first Monday of October, 1879, came into court here the said complainants by their solicitor, Benjamin Price, esquire, and the marshal made return of said subpœna thereon endorsed as follows, to wit: "Service accepted by Brown & Smith, atty's for defendants, Oct. 6th, 1879. John M. McClintock, U. S. marshal."

And the said defendants appeared in court by Sebastian Brown and Robert H. Smith, esquires, their solicitors.

Petition and Order extending time to Answer.—Filed 3d Nov., 1879.

In Circuit Court U. S., Dist. of Maryland.

LOUIS MCMURRAY *et al. vs.* DWIGHT D. MALLORY *et al.*

To the Honorable Judges Hugh L. Bond and Thomas J. Morris.

The petition of Dwight D. Mallory and Jesse C. Luddington, co-

partners trading as D. D. Mallory & Co., respondents in the above-entitled cause, humbly shows unto honors,

14 That the bill of complainant in this cause was filed on the 2d day of September last, and made returnable on the first Tuesday of October following; that these respondents were absent from the city and had no legal notice of said case until late in September; that since that time they have not had sufficient time to prepare the defense which they intend to make, and that it will work no injury to the complainants to have the time for answering extended. They, therefore, pray your honors to extend the time within which they may file their answer, and to grant such other and further relief as their case may require.

BROWN & SMITH,
Solis. for Resp'dts.

Sworn to by Robt. H. Smith before me this 3d day of November, 1879.

JAS. W. CHEW,
Clerk U. S. Dist. Ct.

Ordered by the court on the foregoing petition this 3d day of November, A. D. 1879, that the time for respondents filing their answer in the above cause be extended thirty days from the date hereof.

HUGH L. BOND,
Ct. Judge.

15 *Answer.—Filed 3d December*, 1879.

In the Circuit Court of the United States for the District of Maryland. In equity.

LOUIS McMURRAY, EDWARD M. LANG, and GEORGE BURNHAM, Jr.,
vs.
DWIGHT D. MALLORY and JESSE C. LUDDINGTON, trading as D. D. Mallory & Co.

To the Honorable the Justices of the Circuit Court of the United States for the Fourth Circuit within and for the District of Maryland.

These respondents reserving to themselves all exceptions to the divers errors and inconsistencies of the said bill of complaint, for answer to so much thereof as they are advised is material for them to answer, say:

First. That they deny that Abel Barker was the true, original, and first inventor and discoverer of a certain new and useful invention, to wit, an "Improvement in Soldering Devices," or that said invention was not known or used by others before such invention or discovery by said Abel Barker, or that the same was not in public use or on sale in this country, more than two years before the said Barker's application for letters patent therefor, and leave the complainants to make such proof thereof as they are advised is material for them to make.

16 *Second.* These respondents have no knowledge of the various proceedings upon which the said Barker procured letters patent No. 103,125, as set forth in complainants' bill of complaint, and leave the complainants to make such proof thereof as they are advised is material for them to make, and they deny that said Abel Barker did in all respects comply with all the requirements of law and the statutes of the United States in such cases made and provided, or that any letters patent were granted him for an improvement in soldering devices on the 17th day of May, 1870.

Third. These respondents deny that said Abel Barker ever put his alleged invention into use, or that said letters patent No. 103,125 were surrendered, or that new letters patent were obtained for the same invention. They aver that said letters patent No. 103,125 were never surrendered as required by law, and said pretended new letters patent were never issued as required by law. These respondents also aver that said pretended new letters patent No. 6846 were not for the same invention as that described in the original letters patent No. 103,125, but for other and different inventions not known to said Barker at the date of his original letters patent No. 103,125.

Fourth. These respondents deny that said new letters patent No. 6846 were ever surrendered, or that new letters patent were obtained for the same invention. They aver that said letters patent No. 6846 were never surrendered as required by law, and said pretended new letters patent No. 8781 were never issued as required by law. These respondents also aver that said pretended new letters patent No. 8781 were not for the same invention as that described in the original letters patent No. 103,125, or in the new letters patent No. 8781, but for other and different inventions not known to said Barker at the date of either thereof.

Fifth. These respondents have no knowledge of the sale, assignment, and conveyance from said Edward M. Lang to the firm of McMurray, Lang and Burnham as set forth in the complain-
17 ants' bill of complaint, and leave the complainants to make such proof thereof as they are advised is material to make.

Sixth. These respondents deny that Jabez A. Bostwick was the true, original, and first inventor of a certain new useful "Improvement in Soldering Irons," or that said invention was not known or used before, and not for sale or in public use for more than two years prior to the date of said Bostwick's application for letters patent therefor, and leaves the complainants to make such proof thereof as they are advised is material for them to make.

Seventh. These repondents have no knowledge of the various proceedings upon which said Bostwick procured letters patent No. 104,412, as set forth in complainants' bill of complaint, and leave complainants to make such proof thereof as they are advised is material for them to make; and they deny that said Jabez A. Bostwick did, in all respects, comply with all the requirements of law and the statutes of the United States in such cases made and provided.

Eighth. These respondents have no knowledge of an assignment from said Bostwick to a certain firm of E. M. Lang & Co., of all his right, title, and interest in said last-mentioned letters patent. They deny that said letters patent No. 104,412 were ever surrendered, or that the new letters patent were obtained for the same invention. They aver that said letters patent No. 104,412 were never surrendered as required by law, and said pretended letters patent No. 8466 were never issued as required by law. They also aver that said pretended new letters patent No. 8466 were not for the same invention as that described in the original letters patent No. 104,412, but for other and different inventions not known to said Bostwick at the date of his original letters patent No. 104,412.

Ninth. These respondents have no knowledge of said alleged assignment from said E. M. Lang & Co. to a certain firm of McMurray,
Lang, and Burnham, of all his right, title, and interest in
18 and to said last-mentioned re-issued letters patent No. 8466,
and leave the complainants to make such proof thereof as they are advised is material for them to make.

Tenth. These respondents deny that the said alleged inventions described and claimed in the said re-issued letters patent No. 8781, and the said re-issued letters patent No. 8466, have been extensively applied to practical use since said alleged assignments, or were before so applied, they deny that said re-issued letters patent belong to and are the exclusive property of the said McMurray, Lang, and Burnham, the complainants, and they deny that said complainants have been or are entitled to any profits or gains arising from said reissued letters patent.

Eleventh. These respondents deny that they have ever made or caused to be made, sold, or caused to be sold, used, or caused to be used, any machine or apparatus containing the devices, improvements, or inventions contained or described in complainants' pretended letters patent, or in either of the claims thereof, or in infringement of any of the lawful rights of complainants, or that they have ever made any gains or profits thereby. And they deny that there has ever been any refusal on their part to pay the complainants any profits, or that by their action complainants have ever been deprived of any just gains or profits. And for answer to the interrogatories to them propounded in said bill of complaint, they say as follows:

In answer to the first, second, third, fourth, fifth, and sixth interrogatories, they say:

They have no knowledge other than the allegations contained in the bill of complaint. In answer to the seventh and eighth interrogatories, they say, none.

And these respondents further answering said bill of complaint, say:

1. They are engaged in the business of packing in hermetically sealed cans, oysters, fruits, and vegetables, and in the prosecution of their business do now use, and for many years have been using,

what is known as the "Tillery Soldering Iron," which iron
19 is constructed in accordance with letters patent No. 126,852, granted to Jno. A. Tillery and Samuel A. Ewalt, of Baltimore, Maryland, also letters patent No. 127,119, granted to said Tillery, assignor to himself and said Ewalt, and also letters patent No. 127,120, granted said Tillery and Ewalt.

2. That these respondents, and many others engaged in the same business in Baltimore city, have for several years used said Tillery Soldering Iron, with the full knowledge and consent of the complainants, as well as said Barker and Bostwick, and of each of them, and without any intimation from them, or either of them, that they were guilty of any infringement of any letters patent granted to or owned by them or any of them. That by said conduct they abandoned to the public the entire inventions described in said letters patent No. 103,125, No. 104,412, and said re-issued letters patent No. 8781, No. 8466, wherefore the complainants are not entitled to the relief prayed for, and said letters patent, and said pretended re-issued letters patent are invalid, void, and of no effect.

3. That said Abel Barker and Jabez A. Bostwick, well knowing their said alleged inventions to be of little or no value, did part with their respective interests therein for trifling considerations, and said complainants, if they became the purchasers thereof, paid insignificant sums therefor, hoping, however, to make large gains in the way of royalties levied upon the large number of soldering irons which are now used, wherefore the complainants are not entitled to the relief asked for by them.

4. They aver that said Abel Barker was not the original and first inventor of the improvements in soldering devices described in letters patent No. 103,125, and said re-issued letters patent No. 6846, No. 8466, and No. 8781; and that said Jabez A. Bostwick was not the original and first inventor of the improvements in soldering irons described in the letters patent No. 104,412, and said pretended re-issued letters patent No. 8466, and they aver that substantially the same subject-matter was before the alleged in-
20 vention thereof by said Barker and Bostwick, or either of them, invented by James L. Gray, of Baltimore city, Maryland, and letters patent No. 63,504, granted to F. M. Hay, M. L. Gray, and M. A. Gray, assignees of said James L. Gray, and that substantially the same subject-matter was before the alleged invention thereof by said Barker and Bostwick, or either of them, invented by William D. Bishop, of New York city, and letters patent No. 10,957 granted him.

And for the purpose of proving that said Abel Barker and Jabez A. Bostwick were not the first and original inventors of their respective inventions, described in said letters patent No. 103,125, No. 104,412, and said re-issued letters patent No. 6846, No. 8466, and 8781, these respondents will produce the following persons, viz:

Jno. A. Tillery, No. 364 William St., Baltimore.

Jno. L. Fritz, No. 574 Hanover St., "

of January, 1880, that the respondents shall take and complete their testimony in defence on or before the 21st day of February next, and that complainants shall complete their testimony in rebuttal on or before the 21st day of March next.

THOS. J. MORRIS.

Agreement to Extend Time, &c. Filed 20th Feb'y, 1880.

In Circuit Court of the United States for Dist. of Maryland.

McMURRAY, LANG & BURNHAM,
vs.
D. D. MALLORY & Co.

It is agreed that the time of taking respondents' testimony is hereby extended until the 6th day of March, 1880.

BENJ'N PRICE,
For Complainants.
BROWN & SMITH,
Sol's for Resp'd'ts.

25 *Order Appointing Edward L. Owen Examiner to take Testimony in N. Y. Filed 1st March*, 1880.

U. S. Circuit Court, Maryland.

McMURRAY, LANG & BURNHAM,
vs.
D. D. MALLORY & Co.

Ordered by the court that Edward L. Owen, 71 Wall st., New York, be, and he is, appointed examiner to take testimony of Jabez A. Bostwick, on behalf of defendants in the above cause.

THOS. J. MORRIS.

MARCH 1st, 1880.

Agreement Extending Time for Taking Testimony. Filed 6th March, 1880.

U. S. Circuit Court, Dist of Maryland.

McMURRAY, LANG & BURNHAM,
vs.
D. D. MALLORY & Co.

It is agreed that the time for taking testimony on behalf of defendants in the above cause, be, and the same is hereby, extended until the 20th day of March, 1880, and that the order of
26 court limiting the time for complainants to take their testimony, be, and the same is hereby, rescinded by mutual consent.

BENJ. PRICE,
For Complainants.
BROWN & SMITH,
For Defendants.

BALTIMORM, *Mch. 6th*, 1880.

27 United States Circuit Court, District of Maryland. In Equity.

LOUIS MCMURRAY, EDWARD M. LANG and GEORGE BURNHAM, JR., trading as McMurray, Lang & Burnham,

vs.

DWIGHT D. MALLORY and JESSE C. LUDDINGTON, trading as D. D. Mallory & Co.

December 23rd, 1879—Commission met. Mr. Price appearing as solicitor for complainants, and Mr. Smith on behalf of defendants.

Complainants offer in evidence and herewith file, certified copy of original letters patent to Abel Barker, 103,125, marked Complainants' Exhibit "Barker Original Patent."

28 Complainants herewith offer in evidence, and file certified copy of re-issued letters patent, granted to Abel Barker and Edward M. Lang, January 11th, 1876, No. 6846, marked "Complainants' Exhibit" Barker Re-issue, No. 1.

Complainants further offer in evidence, and herewith file certified copy of re-issued letters patent granted to Edward M. Lang, July 1st, 1879, No. 8781, marked "Complainants' Exhibit Barker Re-issue, No. 2."

Complainants further offer in evidence, and herewith file certified copy of letters patent of the United States, granted to Jabez A. Bostwick, June 21st, 1870, for improvement in soldering iron, No. 104,412, marked Complainants' Exhibit "Bostwick Original Patent."

Complainants also offer in evidence, and herewith file certified copy of re-issued letters patent, No. 8466, for improvement in soldering irons, granted to E. M. Lang & Co., on the 29th day of October, 1878, marked "Complainants' Exhibit Bostwick Re-issue."

Complainants also offer in evidence, and herewith file a certified copy of an asssignment of the Barker patent from Edward M. Lang to McMurray, Lang and Burnham, marked "Complainants' Exhibit Barker Assignment."

Complainants also offer in evidence certified copy of an assignment of the Bostwick patent from E. M. Lang & Co. to McMurray, Lang and Burnham, marked "Complainants' Exhibit Bostwick Assignment."

Solicitor for respondents objects to the introduction of the above exhibits, and to the exhibits themselves.

Samuel A. Ewalt.

SAMUEL A. EWALT, a witness produced on behalf of the complainant, being duly sworn, deposes and says, as follows:

29 First Interrogatory. State your name, age, residence, and occupation.

Answer. My name is Samuel A. Ewalt; I am fifty-five years of

age; I reside No. 74 N. Poppleton street; I am a manufacturer of fruit and oyster cans; I am now in the employ of Mr. McMurray.

2d Inter. Are you acquainted with the complainants and defendants in this case?

Ans. I am.

3d Inter. Have you visited the firm of D. D. Mallory & Co., defendants, during the past summer; and, if yea, state, if you know, upon what work they were engaged, and what sort of tools they were using in soldering cans, and give us the date of such visit, and what you know generally upon the subject? (Objected to.)

Ans. I have visited the firm of D. D. Mallory & Co.; it was on the 18th of August, 1879; they were packing peaches, and were using the Ewalt & Tillery iron in capping cans.

4th Inter. Have you one of the Ewalt & Tillery irons? If yea, produce it. (Objected to.)

Ans. I have; I herewith produce one; it is herewith filed by complainants, marked "Ewalt & Tillery Model."

(The introduction of the exhibit and filing of the same is objected to by solicitor for respondents.)

5th Inter. Do I understand you to say, that Exhibit Ewalt & Tillery Model is an exact representation of the soldering iron used by D. D. Mallory & Co., in soldering cans on the 18th of August, 1879? (Objected to.)

A. It is, with one exception, that this is new and theirs were old —and some of theirs were mended, and had iron around them.

6th Inter. How many men did you see at work with a soldering iron like this on that occasion?

Ans. Ten.

7th Inter. State, if you know, how many soldering irons of the Ewalt & Tillery Model have been furnished to the firm of D. D. Mallory & Co. (Objected to.)

30 Ans. Thirty-three pair or sixty-six irons were furnished by me in the first instance; how many they have got since I do not know.

Cross-examined by Mr. SMITH:

1st Interrogatory. How long have you been in the employ of Mr. McMurray?

Answer. Since about the 21st of October, 1879.

2d Cross-Int. In what capacity are you employed?

Ans. I visit the various packing establishments, and see what capping tools they use, and how many.

3d Cross-Int. For how long are you employed?

Ans. There has been no time set; as long as I do my duty, and he finds work for me, I suppose I will be employed.

4th Cross-Inter. Has he any other employees engaged in the same work?

Ans. Not that I know of.

5th Cross-Inter. How many packing establishments have you visited since you have been in his employ? (Objected to.)

Ans. I cannot give you the number; I visited nearly all.

6th Cross-Inter. Did you inform the proprietors of the object of your visit? (Objected to.)

Ans. I did not.

7th Cross-Inter. Have you visited any person except packers with the same object in view? (Objected to.)

Ans. Certainly not—other persons don't use the iron.

8th Cross-Inter. You are employed, then, to work up evidence for this case? (Objected to.)

Ans. No, sir.

9th Cross-Intr. What, then, is the use of your information?

Ans. Simply to know the different kinds of irons, and how many are in use.

31 10th Cross-Inter. Of what advantage would it be to Mr. McMurray to have this information, except for the purposes of this suit? (Objected to.)

Ans. That I can't answer.

11th Cross-Inter. When he employed you, what did he state to you he wanted you to do, and for what purpose did he want this information?

Ans. To visit the different packing houses and see how many irons, and what kinds were in use. He did not state what he wanted this information for.

12th Cross-Inter. Have you visited Mr. Mallory's house since you have been thus employed?

Ans. I have.

13th Cross-Inter. Did you see Mr. Mallory; and, if so, did you inform him of the object of your visit?

Ans. I saw him, but I did not inform him of the object of my visit; he did not ask me.

14th Cross-Inter. How often did you visited my office (the office of Brown & Smith,) since the 18th of October, and what was the object of your visits? (Objected to.)

Ans. I think twice; friendship was the object of my visits.

15th Cross-Inter. Whose friend are you? (Objected to.)

Ans. I am every honest man's friend.

16th Cross-Inter. Which member of our firm are you on friendly terms with?

Ans. I thought I was on friendly terms with both.

17th Cross-Inter. Did you not come as a spy to learn what you could that would be of advantage to Mr. McMurray in this case?

Ans. No, sir.

18th Cross-Inter. Whom did you come with?

Ans. With Mr. Tillery on one occasion, and once by myself.

19th Cross-Inter. Did you invite Mr. Tillery to come with you, or did he invite you to come with him?

Ans. He invited me to come with him—that Mr. Smith had sent for him.

32 20th Cross-Inter. Do you know what I wanted to see him about?

Ans. Certainly not.

21st Cross-Inter. Did you hear the conversation?

Ans. No, sir; I was too hard of hearing to understand the conversation; I heard a talk; I did not hear a word he said, except a word now and then.

22d Cross-Inter. Did not I say to you, that I did not know how to talk in your presence?

Ans. You did; because I had sold a part of my interest to Mr. Lang.

23d Cross-Inter. And yet at that time you were in the employ of Mr. McMurray, working up evidence in this case, and you knew that we were counsel for Mr. D. D. Mallory & Co., and with Mr. Tillery were working up our defence in this case?

(This question is objected to on the ground that it asks a question and answers it, and on the ground that the witness has sworn that he was not working up testimony in this case.)

Ans. I was at that time in the employ of Mr. McMurray; I was not working up evidence in this case; I knew that you were counsel for D. D. Mallory & Co.; I did know that you with Mr. Tillery were working up testimony for the defence in this case.

24th Cross-Inter. Did you not visit our office shortly after the institution of this suit, at the request of D. D. Mallory & Co., and bring with you certain soldering irons?

Ans. I did visit your office—but did not bring certain soldering irons with me at that time.

25th Cross-Inter. When did you bring them?

Ans. Since the commencement of this suit.

25½ Cross-Inter. Before or after you were employed by Mr. McMurray?

Ans. It was before I was employed by Mr. McMurray.

33 26th Cross-Inter. Did you not, prior to your employment by Mr. McMurray, solicit employment from Mr. Mallory—I mean since the institution of this suit?

Ans. No, sir; I asked him to assist me in getting a set of can tools.

27th Cross-Inter. What did he say? (Objected to.)

Ans. He had some tools on hand that he would give me if they would be of service to me.

28th Cross-Inter. Have you ever informed Mr. Tillery of your employment by Mr. McMurray, and of the nature of such employment? (Objected to.)

Ans. I have not.

29th Cross-Inter. Does he, so far as you know, have any idea that you are so employed? (Objected to.)

Ans. Not that I know of.

30th Cross-Inter. Have you not since being so employed been frequently with Mr. Tillery and had frequent conversations with reference to this case?

Ans. Yes.

31st Cross-Inter. Who employed you to visit D. D. Mallory & Co.'s packing house on the 18th of August last?

Ans. No one.

32d Cross-Int. What did you go there for?

Ans. To see if Mr. Mallory had got back from the country.

33d Cross-Int. How did you come to count the irons in use?

Ans. Being acquainted with the men, I noticed how many men he had at work.

33½ Cross-Inter. How did you fix the date?

Ans. Simply because I knew the date we were out of employment. We met Mr. Lang on the street; he asked us where we had been, and asked how many hands were at work.

34th Cross-inter. You had prior to that learned that this suit was to be instituted, had you not? (Objected to.)

Ans. I saw in the paper on the 16th of August, 1879, the notice of the suit.

34 35th Cross-Inter. You are confident that it was on the 16th of August you saw a notice that this suit was instituted, are you?

Ans. I must correct something now; I picked up a paper, but can't remember the date of the paper; in that paper I saw that the suit had been instituted on the 14th day of August; I can't say now whether it was the suit or co-partnership that I saw was on the 14th of August?

36th Cross-Inter. But are you certain that your visit to Mr. Mallory's packing house was after you had learned of the institution of this suit?

Ans. That I can't say.

37th Cross-Inter. Why did Mr. Lang ask how many men were employed?

Ans. I suppose because he had entered this suit, or had entered into co-partnership, and intended to enter suit.

38th Cross-inter. You know, then, that the question had reference to this suit?

Ans. I suppose so.

39th Cross-Inter. When did you furnish the respondents with thirty-three pairs of irons?

Ans. Some time in the latter part of 1872.

40th Cross-Inter. By whom were you employed prior to your employment by Mr. McMurray?

Ans. A. Fisher & Co.

41st Cross-Inter. When did your employment with them cease?

Ans. I don't recollect the date; it was about the last of September, or first of October, 1879.

41½ Cross-Inter. How long has the Tillery & Ewalt soldering iron been in use?

Ans. Since they were patented, May 14th, 1872.

42nd Cross-Inter. Who patented that iron?

Ans. Ewalt & Tillery patented it.

43rd Cross-inter. Who invented it?

(Objected to.)

Ans. It was a joint invention; I invented one part and Tillery the other.

SAMUEL A. EWALT.

35 Subscribed and sworn to before me, this 23d day of December, 1879.

ISAAC BROOKS, JR.,
Examiner.

Thomas M. Emmart.

THOMAS M. EMMART, a witness produced on behalf of complainants, being duly sworn, deposes and says, as follows:

1st Interrogatory. State your name, age, residence, and occupation?

Answer. My name is Thomas M. Emmart; I am 33 years of age; I live No. 137 S. Fremont street; I am a can maker.

2d Inter. Have you visited the establishment of D. D. Mallory & Co., and if yea, state if you know, what character of work they were engaged in, what kind of tools they were using in soldering cans, and the date of your visit?

Ans. I visited the establishment of D. D. Mallory & Co.; they were engaged in putting up peaches; they were using the Ewalt & Tillery iron; I was there on the 18th and 19th of August, 1879.

3d Inter. Look at Exhibit "Ewalt & Tillery Model," and state if the iron that you saw at D. D. Mallory's differed from or corresponded with that exhibit.

Ans. They were the same kind.

4th Inter. How many men, if you know, were using this soldering tool on the 18th and 19th of August, 1879, the date of your visit to the factory of D. D. Mallory & Co.?

Ans. Nine or ten.

5th Inter. Was this number engaged on both occasions?

(Objected to as leading.)

Ans. On both occasions.

Cross-examined by Mr. SMITH:

1st Cross-Interrogatory. By whom are you at present employed?

36 Ans. By Philip Shott.

2d Cross-Inter. By whom, on the 18th and 19th of August?

Ans. By A. Fisher & Co.

3d Cross-Inter. At whose solicitation did you visit Mallory's packing house?

Ans. I went down there in company with Mr. Ewalt the first time; I went the second time at the solicitation of no one.

4th Cross-Inter. Did you go for the purpose of ascertaining how many soldering irons were in use there?

Ans. No; I can't say that I went down for that purpose.

5th Cross-Inter. What did you go for?

Ans. I went with Mr. Ewalt the first time for a walk, and the second time, I went down to see about peaches more than anything else; I had no particular business.

6th Cross-Inter. How did you come to count the soldering irons in use?

Ans. Because I asked the capper there how many hands they were working, and he told me 12 or 13; I could not count that many myself; I counted 10.

7th Cross-Inter. How do you fix the date?

Ans. Because we had no work on those dates.

8th Cross-Inter. Are those the only dates this summer you had no work?

Ans. Yes, sir.

9th Cross-Inter. Did you mark the dates?

Ans. I did.

10th Cross Inter. What did you mark it on?

Ans. On a card.

10½ Cross-Inter. Let me see the card?

Witness herewith produces a postal card, which he herewith files, marked "Respondents' Exhibit, Emmart," at the request of solicitor for respondents.

11th Cross-Inter. When did you make these entries on Exhibit Emmart?

Ans. On the 18th and 19th of August.

37 12th Cross-Inter. At whose request?

Ans. At the request of no one.

13th Cross-Inter. Why then did you mark these entries, and preserve the card?

Ans. Because I heard some talk of this affair, and I just made a memorandum of it.

14th Cross-Inter. Who did you hear talking?

Ans. Mr. Lang and Mr. Ewalt.

15th Cross-Inter. When and where?

Ans. On Broadway, on the 18th of August.

16th Cross-Inter. Mr. Lang then requested you to count the number of irons in use at Mr. Mallory's establishment, did he not?

Ans. He did not.

17th Cross-Inter. What did he say to you?

(Solicitor for complainants objects to the last two questions, on

the ground that there is nothing in the record to show that Mr. Lang had spoken anything to him at all.)

Ans. Mr. Lang did not say anything to me.

18th Cross-Inter. You preserved this memorandum to use in this case, did you not?

Ans. I did not know that there was going to be any case.

19th Cross-Inter. Why then did you preserve this memorandum?

Ans. Because as I told you before, I heard them say it would be important.

20th Cross-Inter. How did they say it would be important?

Ans. The gentlemen said it would be important to keep the dates; they were not talking to me.

21st Cross-Inter. Did they tell you to keep it?

Ans. Not at that time.

22d Cross-Inter. When did they?

Ans. Shortly afterwards, I don't know whether it was a week or not.

38 23d Cross-Inter. There was no use that you could make of this memorandum, was there?

Ans. I did not know at that time whether there was or not.

24th Cross-Inter. How could it have been of any use to you?

Ans. I don't know how.

25th Cross-Inter. Are you in the habit of making entries of the number of irons in use at the different packing establishments that you visit?

Ans. No, sir; I don't know that I am in the habit of doing so.

26th Cross-Inter. Would you have made this entry if you had not been requested to?

Ans. No, sir; I don't know that I would if I had not heard the remark made.

THOMAS M. EMMART.

Subscribed and sworn to before me, this 23d day of December, 1879.

ISAAC BROOKS, JR., *Examiner.*

Then adjourned.

January 17th, 1880.—Commission met; Mr. Price appearing for complainants, and Mr. Smith for respondents.

R. D. Williams.

R. D. WILLIAMS, a witness produced on behalf of the complainants, being duly sworn, deposes and says, as follows:

1st Interrogatory. State your name, age, residence, and occupation?

39 Answer. My name is R. D. Williams; I am 29 years of age; I reside in Baltimore city; I am solicitor of patents and expert.

2d Inter. State, if you please, what knowledge you have of the mechanic arts and patents relating thereto, what your experience has been therein, and generally whether you are competent to testify as expert in patent causes or not.

Ans. My collegiate education in this country and abroad was devoted almost exclusively to scientific subjects; I was engaged as Professor of Natural Sciences in the Agricultural College of this State for nearly four years, and subsequently held the position of examiner in the United States Patent Office. During the last three years and a half I have been engaged in my present business, and have frequently been called upon to examine and compare mechanical inventions, and have also been called upon in several instances to testify as expert in patent and other causes. I believe that I am competent to act in that capacity.

3d Inter. Have you, on behalf of complainants in this cause, made application to the Patent Office for certified copy of Patent Office models, pertaining to the patents of Abel Barker and Jabez A. Bostwick, for Improvement in Soldering-Irons and Devices; and if yea, what was the result of your application therefor?

Ans. I have; and the destruction of both models referred to has been certified to me by the office, in the papers which I now produce and file, marked R. D. Williams No. 1 and No. 2. (Objected to.)

4th Inter. Have you read, and do you understand, re-issued letters patent of the United States, No. 8781, granted to Edward M. Lang, assignee of Abel Barker, for Improvement in Soldering Devices, the said patent being now shown you, filed in this cause, and marked Complainants' Exhibit Barker Re-issue No. 2?

Ans. I have read, and fully understand the said letters patent.

40 5th Inter. Compare, if you please, the invention claimed and described in said letters patent, with the soldering device now shown you, filed in this cause, marked Complainants' Exhibit "Ewalt and Tillery Model;" point out, if you please, the resemblances and differences between said patent and said model, and give your reasons for any opinions you may express? (Objected to.)

Ans. I find that the Barker patent referred to describes a soldering device, consisting of a soldering tool of sufficient thickness to retain the heat, and of suitable size to cover the lid or cap of the can, and having a recess in its under side to give room for the convex lid, and confine the soldering process to the outer edge of the latter. The tool is provided with a handle, and a rod for holding the cap in place pending the operation. The claims annexed to the patent cover respectively:

First. The combination in a soldering machine, of a rod for holding the can cap in place, with a soldering iron mounted upon the rod, and susceptible of rotation about it.

Second. The combination of the rod for holding the can cap in

place with the iron sliding upon the rod, and susceptible of rotation about it.

Third. The combination of a soldering tool, with a rod passing through the tool, to hold the can cap in place in the process of soldering.

Fourth. The combination of a soldering tool, conforming in shape to the cap to be soldered, with an independently movable rod upon which the tool is mounted.

Fifth. The tool having a recess in its under side, in combination with and mounted upon an independently movable rod.

I find the exhibit marked "Ewalt & Tillery Model" to consist of a soldering tool of sufficient size to retain the heat, conforming in shape to the cap to be soldered and mounted upon, susceptible of rotation about, and of sliding upon a rod. The principal difference
which I perceive between the Ewat & Tillery model, and the
41 device described in the Barker patent is, that the soldering edge of the patented device is a complete annulus, while the soldering edge of the model constitutes but a part of a circle.

I have no hesitation in stating that in my opinion the Ewalt & Tillery model is a substantial embodiment of the Barker invention. Claims one, two, and four, of the Barker patent, apply literally to the Ewalt & Tillery model, and a liberal and proper construction of claims three and five, make them also applicable. My reason for this latter statement is, that while the rod in the Ewalt & Tillery model does not literally pass through the tool itself, as described in the third claim of the patent, it does pass through a shank, to which the tool is rigidly secured, and its function in holding the can cap in place is the same, and further, that while the Ewalt & Tillery model has not a recess to admit the convex lid of the can as described in the fifth claim, it affords ample space for any convexity of the lid.

6th Inter. I find in the specification of Barker Re-issue No. 2, beginning at the bottom of the first column, commencing with the words "inclosing or sealing a can," a description of the mode in which the device described in the Barker patent is used, will you please look at that description and compare the same with the Ewalt & Tillery model, and point out the differences and resemblances between the mode thus described, and the manner of using that model?

(Objected to.)

Ans. The mode described in the patent of using the patented iron is the mode of using the Ewalt & Tillery model. Inasmuch, however, as the rod "D" of the Barker patent passes through the tool, as shown in the drawing, slightly eccentrically, conceiving the tool to be guided in its rotation by the edge of the cover or lid, the rod in that case acts merely as a holder for the can cap. Conceiving, on the other hand, that the rod be stepped in the centre hole of the cover, (if it have one,) the rotation of the tool would be enforced about it as a pivot, while the rod incidentally held the

42 cover or cap in place. The Ewalt & Tillery model can only operate in this latter way.

7th Inter. If you were about to seal a can with a tool, as shown by the Ewalt & Tillery model, describe, if you please, how you would go to work about it, and state the steps you would take in the process of soldering?

Ans. I should place the cover or cap in proper position upon the can, and apply solder to the edge of the cap. I should then place the pointed rod upon the cover, and slide the soldering tool down the rod, and in contact with the solder—the rod being held vertically. I should then turn the soldering tool back and forth upon the solder, until it was melted and spread evenly around the edge of the cap, and finally withdraw the soldering tool, still holding the rod upon the can cap, until the solder had hardened, when I should remove the rod and the operation would be complete.

8th Inter. Look at letters patent of the United States now shown to you, granted to E. M. Lang & Co., assignees of Jabez A. Bostwick, for Improvement in Soldering Tools, dated October 29th, 1878, No. 8466, filed in this cause as Complainant's Exhibit "Bostwick Re-issue," and state whether you have read and understand the same?

Ans. I have read and do understand the same.

9th Inter. Compare, if you please, the said letters patent, and the invention described and claimed therein, with the said Ewalt & Tillery model; point out, if you please, the resemblances and differences between the two, and give in detail your reasons for any opinion you may express? (Objected to.)

Ans. I find that the invention described in the Exhibit Bostwick Re-issue, consists in the combination of an iron, adapted to produce, when heated, a proper flow of solder along the joint of the can cap, with a central rod about which the iron may revolve. I find the invention embodied in a tubular iron, inclosing a centre rod, and provided with a lateral handle, by means of which the iron may be rotated about the rod. The operation of the device is described to be about as follows: A rod is placed centrally upon the can

43 cap, to the edge of which solder is applied, and the iron properly heated is slid down over the rod, and in contact with the solder, which is thereby melted; the iron is then rotated by means of its handle, in order to flow the solder to every part of the seam. The iron is then lifted, the rod still bearing upon the can cap to hold it, pending the setting of the solder, when the operation is complete. The claims appended to the patent cover respectively a soldering tool, arranged to revolve about a central pivotal rod, and the combination of a hollow iron with a separate and enclosed weight for steadying the cap. I find the Ewalt & Tillery model to be a substantial embodiment of the invention. Claim 1 of the patent applying literally to the model, and claim 2 also, when fairly and liberally construed. My reason for this latter statement with reference to claim 2, is based upon the fact that it

is stated in the body of the patent, that the soldering edge may be either continuous or annular, or forming nearly the arc of a circle, as shown in the Ewalt & Tillery model, of which the rod is the substantial equivalent of that shown in the Bostwick patent.

10th Inter. I find about the middle of the second column the following language: "The central rod thus serves not only as a guide to conduct the heated iron directly to the joint, but also as a pivot to determine and facilitate its ready movement along the joint."

11th. Inter. What difference do you find in the function of the rod thus described in the patent and the function of the rod as shown in the Ewalt & Tillery Patent? (Objected to.)

Ans. None whatever.

Then adjourned to Tuesday, 20th of January, 1880, to 2½ o'clock.

JANUARY 20TH, 1880.

Commission met; all counsel present.

44 Cross-examined by Mr. SMITH:

1st Cross-Interrogatory. Did not you, as solicitor, procure the re-issued letters patent, marked Barker Re-issue No. 2, and also letters patent marked Bostwick Re-issue?

Ans. I did procure the former, not the latter.

2d Cross-Inter. By whom were you employed? (Objected to.)

Ans. By Mr. Lang, of Portland.

3d Cross-Inter. Have you not also been employed by Mr. McMurray, one of the complainants in this suit, to obtain letters patent for other inventions? (Objected to.)

Ans. That I decline to answer. I have been employed by Mr. McMurray in the matter of an interference relating to a trade mark.

4th Cross-Inter. Do you say that you have not been so employed? (Objected to.)

Ans. That I decline to answer. I do not propose to state to any one what applications of any one's are or are not pending in my hands.

5th Cross-Inter. Have you obtained any letters patent for Mr. McMurray for other inventions than those involved in this suit? (Objected to.)

Ans. I have never obtained letters patent for Mr. McMurray.

6th Cross-Inter. Are you a practical capper?

Ans. No, sir.

7th Cross-Inter. Have you any knowledge of the use of soldering devices?

Ans. Yes, I believe I have.

8th Cross-Inter. How obtained?

Ans. I have taken out as solicitor some six or seven patents in the class of soldering devices, and in prosecuting the applications,

and in the examinations preliminary thereto, I have become quite familiar with the class.

9th Cross-Inter. For whom were these letters patent obtained?

(Objected to.)

45 Ans. J. J. Henry, three patents; William Painter, E. K. & J. M. Bruce, Abel Barker—six in all. I do not re-call any others.

10th Cross-Inter. Do you find in either of the letters patent, marked Barker Re-issue No. 2, or Bostwick Re-issue, any claim for the vent which you find in the end of the rod of Ewalt & Tillery model?

Ans. I do not.

11th Cross-Int. Is there any such vent in the devices constructed in accordance with these exhibits?

Ans. There is no vent hole shown or described in the rod in either of the exhibits referred to: it would be anomalous if there were, as no centre hole is shown in the can cap. The vent hole is not essential to the operation of either device, as described in the patents.

12th Cross-Inter. Is not a vent hole necessary for the purpose of canning properly?

Ans. Not being a practical capper, I cannot say—it certainly is not essential to the operation of the iron shown in the exhibits.

13th. Cross-Inter. Have you ever seen a soldering device constructed in accordance with the Barker Re-issue No. 2?

Ans. I have; at Mr. McMurray's packing house in this city.

14th Cross-Inter. Was it in use?

Ans. I saw it in use, and used it myself.

15th Cross-Inter. Was that the iron that was in use in his establishment?

Ans. Whether Mr. McMurry has used the identical Barker irons which I saw, in his business of canning provisions, before or since then, I do not know.

16th Cross-Inter. Were you in his establishment when the process of capping was going on; and if yea, were the irons in use constructed according to the Barker Re-issue No. 2?

Ans. The irons which I saw in the hands of Mr. McMurray's workmen, were made, I believe, after Mr. McMurray's
46 own patent. They were not constructed according to Barker Re-issue No. 2.

17th Cross-Inter. Does the rod D in the Barker Re-issue pass through the centre of the soldering tool?

Ans. It is not so shown in the drawing, nor so described in the specification.

18th Cross-Inter. Is the soldering edge of the tool A a sharp or flat one?

Ans. In the only figure throwing any light on that subject, it is shown as flat. But it is described as being of such construction as

to confine the soldering process to the edge of the lid or cover, and to be brought in contact with the solder, and spread it evenly around the edge.

19th Cross-Inter. Do either of the exhibits in the specification or drawings describe or show any elbow and socket, such as you find in the Ewalt & Tillery model?

Ans. They do not show nor describe that identical construction, but inasmuch as the shank and elbow are rigidly affixed to the tool, and the rod passes through the elbow, I consider the difference but colorable.

20th Cross-Inter. Have you ever seen a soldering device constructed according to the Bostwick Re-issue; and if so when, and was it in active use?

Ans. I have never seen one.

21st Cross-Inter. Have you sufficient knowledge to state whether or not, the soldering device known as the Ewalt & Tillery iron, is very economical in the use of solder?

Ans. I have reason to believe that it is an efficient tool for the purpose for which it is intended, and see no reason why it should be inferior to any with which I am acquainted in point of economy of solder.

22d Cross-Inter. So far as you know, does any person anywhere use soldering devices for capping, constructed either according to the Baker Re-issue or the Bostwick Re-issue?

47 Ans. I never saw cans being capped elsewhere than at Mr. McMurray's, and I cannot positively state, that irons made literally according to the drawings of either the Barker or Bostwick patents, are anywhere used. But irons embodying both inventions and varying but colorably from the devices shown in the drawings of the patents are, I believe, in general use.

23d Cross-Inter. Do you think a practical capper would use a soldering device constructed according to either of these re-issued patents?

Ans. Certainly; I see no reason why he should not.

24th Cross-Inter. But you do not know of one who does use such a device?

Ans. No, nor of one who does not—as I before stated, I have never been in but one canning establishment.

25th Cross-Inter. Did any of Mr. McMurray's cappers use the iron constructed according to the Bostwick or Barker re-issue patent?

Ans. I am not positive, but I think one did.

26th Cross-Inter. If such a one did, was it not for your benefit and information?

Ans. No, sir.

27th Cross-Inter. Was he using it constantly?

Ans. I have stated that I did not know positively that one of the workmen used the iron at all,—nor do I know whether or not the iron was used before my visit or since.

Re-Direct by Mr PRICE:

1st Re-Direct Interrogatory. In an answer to the 16th cross-interrogatory you state,—that the irons in use at McMurray's factory were not constructed according to Barker re-issue No. 2, did you mean by that, that they were not constructed according to the description and claim in said patent, or in accordance with the precise construction shown in the drawing? (Objected to.)

Answer. I meant that they were not literally constructed according to the patent. They had several features in common with
48 the Barker iron, viz: An annular soldering edge, and a recess in the under side of the tool, and a holder was used for retaining the cap in place.

2d Re-Direct Inter. You have said in answer to one of the cross-interrogatories, that you used yourself, at Mr. McMurray's, a tool constructed after the device shown in Baker re-issue No. 2, how did it work?

Ans. Unexceptionably.

3d Re-Direct Inter. In answer to 21st Cross-Interrogatory in relation to the economy of solder in the Ewalt & Tillery Iron, have you any reason to believe that there is any greater economy in solder, by the use of said iron, than by the use of Barker or Bostwick?

Ans. As the devices are, to all intents and purposes, similar in construction, and are identical in operation, I see no reason why one should possess any material advantage over the other in point of economy of solder.

Re-Cross by Mr. SMITH:

1st Re-Cross-Interrogatory. Was the machine you have spoken of in the 2d Re-Direct Interrogatory, constructed literally in accordance with the Bostwick?

Answer. The rod passed eccentrically through the iron, there were several Barker irons, some with a sharp and some with a flat lip. I capped up cans with both kinds and noticed no difference as to facility in operation or efficiency in result between them, both did good work.

R. D. WILLIAMS.

Subscribed and sworn to before me, this 20th day of January, 1880.

ISAAC BROOKS, JR., *Examiner.*

49 *Complainants' Exhibit—"Barker Original Patent."*

Department of the Interior, United States Patent Office.

To all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted Abel Barker, May 17th, 1870, No. 103,125, for Improvement in Can Openers.

In testimony whereof, I, W. H. Doolittle, Acting Commissione of Patents, have caused the seal of the Patent Office to be hereunt affixed this twenty-second day of December, in the year of our Lor one thousand eight hundred and seventy-nine, and of the indepen ence of the United States the one hundred and fourth.

[L. S.] W. H. DOOLITTLE,
Acting Commissioner.

50 *No.* 103,125.

THE UNITED STATES OF AMERICA.

To all to wh n these letters patent shall come:

Whereas Abel Barker, of Wyoming, Pennsylvania, has allege that he has invented a new and useful improvement in can-openers and has made oath that he is a citizen of the United States, that h verily believes he is the original and first inventor, or discoverer o the said improvement, and that the same hath not to his knowledg and belief been previously known or used, has paid into the Treas ury of the United States the sum of thirty-five dollars, and presente a petition to the Commissioner of Patents praying that a paten may be issued therefor.

These are therefore to grant to the said Abel Barker, his execu tors, administrators, or assigns, for the term of seventeen year from the seventeenth day of May, one thousand eight hundred an seventy, the full and exclusive right and liberty of making, using and vending to others to be used, the said improvement, a

51 description whereof is given in the annexed schedule, an made a part of these presents.

In testimony whereof, I have caused these letters to be mad patent, and the seal of the Patent Office to be hereunto affixed.

Given under my hand, at the City of Washington, this seven teenth day of May, in the year of our Lord one thousand eigh hundred and seventy, and of the independence of the United State of America the ninety-fourth.

[SEAL.] W. T. OTTO,
Acting Secretary of the Interior.
SAM'L S. FISHER,
Commissioner of Patents.

Countersigned and sealed with the seal of the Patent Office.

52 (Here follows diagram marked page 52.)

53 UNITED STATES PATENT OFFICE.

ABEL BARKER, OF WYOMING, PENNSYLVANIA.

Improvement in Can-Openers.

Specifications forming part of Letters Patent No. 103,125, dated May 17, 1870.

To all whom it may concern:

Be it known, that I, Abel Barker, of Wyoming, county of Lu-

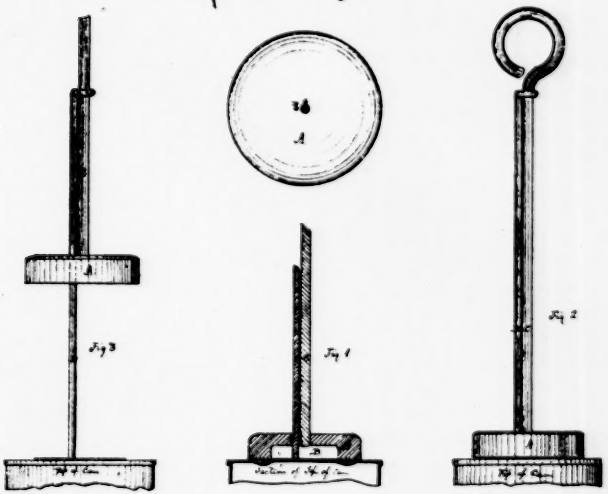
52

A. Barker,

Soldering Machine.

No. 103125. Patented May 17, 1870.

No. 250.
McMurray et al
v.
Mallory et al
page 52



Witnesses:
Thos. H. Dodge
E. J. Dunwick

Abel Barker
Inventor.

zerne, and State of Pennsylvania, have invented a new and useful Machine for Opening and Closing or Sealing Fruit, Oyster, and all other Cans Hermetically Sealed; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a vertical section. Fig. 2 is a representation of the machine as applied to the can in opening; Fig. 3, as applied in closing or sealing, with the disk withdrawn and the sliding rod pressed upon the cover to hold it until the solder or sealing material hardens.

In constructing this machine I make the disk or casting A of sufficient thickness to retain the heat, and of suitable size to cover the lid of the can, with the recess B in the under side to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover.

To this disk I connect the handle C, of sufficient length to hold when heated.

At the side of, and parallel with, the handle I connect the small rod or wire D, with a loop or ring connecting it with the handle at the top and the bottom, passing through the disk A, so as to allow it to slide up and down.

In opening or unsealing a can, the disk A is heated sufficiently to melt the solder, and placed over the cover till the solder is melted, when it is taken off, and the cover removed by any sharp-pointed instrument. After the can is emptied, the cover may be replaced and slightly fastened on one side, till the can is wanted for cleaning and refilling, when it may be taken off and the can filled. The cover is then to be carefully laid in place on the can, and new solder or material placed around the lid, if necessary. The rod D is pushed down through the disk, and placed upon the center of the cover to hold it. The heated disk is then to be pushed down, in contact with the solder or sealing material till it is melted, then turned back and forth till the solder is spread evenly around the lid. The disk is then to be withdrawn, with the rod D still pressed upon the lid, till the solder or sealing material sets or hardens, when the operation is completed.

What I claim, and desire to secure by letters patent is—

The disk A, with the recess B in the under side, as set forth, in combination with the movable rod or wire D, to hold the lid while resealing or closing.

ABEL PARKER.

Witnesses:
BENJ'N H. THROOP.
EDWARD J. DIMMICK.

54 *Complainants' Exhibit*—"*Barker Re-issue No.* 1."

Department of the Interior, United States Patent Office.

To all persons to whom these present shall come, greeting:

This is to certify that the annexed is a true copy from the records of this office of the re-issue letters patent granted Barker and Lang January 11th, 1876, No. 6846, for improvement in soldering and unsoldering can caps.

In testimony whereof, I, H. E. Paine, Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this thirty-first day of October, in the year of our Lord one thousand eight hundred and seventy-nine, and of the independence of the United States the one hundred and fourth.

[SEAL.] H. E. PAINE,
Commissioner.

55 *Re-issue No.* 6846.

THE UNITED STATES OF AMERICA.

To all to whom these presents shall come:

Whereas Abel Barker, of Wyoming, Pennsylvania, assignor of one-half interest to Edward M. Lang, of Portland, Maine, has presented to the Commissioner of Patents a petition praying for the re-issue of letters patent for an alleged new and useful "improvement in soldering and unsoldering can caps," (for which letters patent were issued to him dated May 17th, 1870, which letters having been surrendered, the same have been canceled and new letters ordered to issue to him and said assignee on an amended specification,) a description of which invention is contained in the specification, of which a copy is hereunto annexed and made a part hereof, and has complied with the various requirements of law in such cases made and provided; and—

Whereas upon due examination made, the said claimant is adjudged to be justly entitled to a patent under the law.

56 Now, therefore, these letters patent are to grant unto the said Barker and Lang, their heirs, or assigns for the term of seventeen years, from the seventeenth day of May, one thousand eight hundred and seventy, the exclusive right to make use and vend the said invention throughout the United States and the territories thereof.

In testimony whereof, I have hereunto set my hand and caused the seal of the Patent Office, to be affixed at the city of Washington, this eleventh day of January, in the year of our Lord one thousand eight hundred and seventy-six, and of the independence of the United States of America the one hundredth.

[SEAL.] B. R. COWEN,
Acting Secretary of the Interior.

Countersigned— R. H. DULL,
Commissioner of Patents.

(Here follows diagram, marked page 57.)

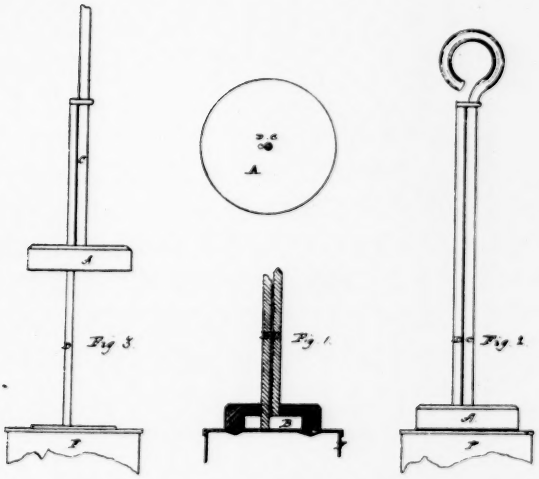
57

A. BARKER.

SOLDERING AND UNSOLDERING CAN-CAPS.

No. 6,846. Reissued Jan. 11, 1876.

No. 250
McMurray et al
v.
Mallory et al
} page 57.



Witnesses
W. McLaughlin
F. T. Stiles

Inventor
Abel Barker
By Smith & Bird
Attys

58 UNITED STATES PATENT OFFICE.

ABEL BARKER, OF WYOMING, PENNSYLNANIA,

Assignor of one-half Interest to Edward M. Lang, of Portland, Maine.

Improvement in Soldering and Unsoldering Can-caps.

Specification forming part of Letters Patent No. 103,125, dated May 17, 1870; Re-issue No. 6846, dated January 11, 1876; Application filed December 21, 1875.

To all whom it may concern:

Be it known that I, Abel Barker, of Wyoming, in the county of Luzerne, and State of Pennsylvania, have invented certain new and useful improvements in Can Openers and Closers, and I do hereby declare that the following is a full, clear, and exact description thereof, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 is a vertical section; Fig. 2 is a representation of the machine as applied to the can in opening; Fig. 3, as applied in closing or sealing, with the disk withdrawn and the sliding rod pressed upon the cover to hold it until the solder or sealing material hardens.

The purpose of my invention is to provide a convenient machine or device for opening and closing or sealing fruit, oyster, and all other cans hermetically sealed.

In constructing the machine I make the disk, casting, or tool A of sufficient thickness to retain the heat, and of suitable size to cover the lid of the can, with the recess B in the under side to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover. To this disk I connect the handle C. In connection with the handle I use the small rod or wire D, which also passes through the center of the disk A, so as to allow it to slide up and down. In opening or unsealing a can, the tool A is sufficiently heated to melt the solder, and placed over the cover till the solder is melted, when it is taken off, and the cover removed by any sharp-pointed instrument. In closing or sealing a can, the cover is to be placed in propor position upon the can and solder laid upon the edge of the cover. The rod D is pushed down through the tool and placed upon the cover to hold it. The heated disk is then to be pushed down in contact with the solder until it is melted, then turned back and forth until the solder or sealing material is spread evenly around the edge of the cover. The disk is then to be withdrawn, with the rod still pressed upon the lid until the solder or sealing material sets or hardens, when the operation is completed.

I am aware that in the construction of cans the tops and bottoms

have been soldered on by means of a circular surface and flange, forming part of a furnace, by which heat was applied to the seam and lap of the can, while the rest of the top or bottom was protected from the same degree of heat by an air flue from below. In this method the solder was placed within the can, after the bottom or the top had been pressed on, and the can set upon the heated surface and within the flange, the mass of the solder insuring its application to all parts of the seam. Such a device cannot be used to solder can-caps, nor do I claim it.

What I claim as my invention, and desire to secure by letters patent of the United States, is—

1. For the purpose of soldering and unsoldering can-caps, a disk, circular casting, or soldering tool, having a recess in the under side, and outside the recess an edge or surface, by means of which edge or surface the solder is melted and applied.

2. The disk or soldering tool A, with the recess B in the under side, as set forth, in combination with the movable rod or wire D.

3. For soldering can-caps, the combination of a soldering tool, which conforms in shape to the cap to be treated, and the rod or wire D.

In testimony that I claim the foregoing, I have hereunto set my hand and seal this 13th day of May, 1875.

ABEL BARKER. [L. S.]

Witnesses:

THOS. HENRY ATHERTON.
L. W. DEWITT.

59 *Complainants' Exhibit—"Barker Re-issue No. 2."*

Re-issue, the United States of America, No. 8,781.

To all to whom these presents shall come:

Whereas Abel Barker, of Wyoming, Pennsylvania, assignor to Edward M. Lang, has presented to the Commissioner of Patents, a petition praying for the re-issue of letters patent for an alleged new and useful Improvement in Soldering Devices, for which letters patent were issued to him, dated May 17, 1870; the same surrendered and new letters issued to him and said assignee, dated January 11th, 1876, which last letters having been surrendered, the same have been cancelled and new letters ordered to issue to said assignee on an amended specification. A description of which invention is contained in the specification of which a copy is hereunto annexed and made a part hereof, and has complied with the various

60 requirements of law in such cases made and provided; and

Whereas, upon due examination made, the said claimant is adjudged to be justly entitled to a patent under the law.

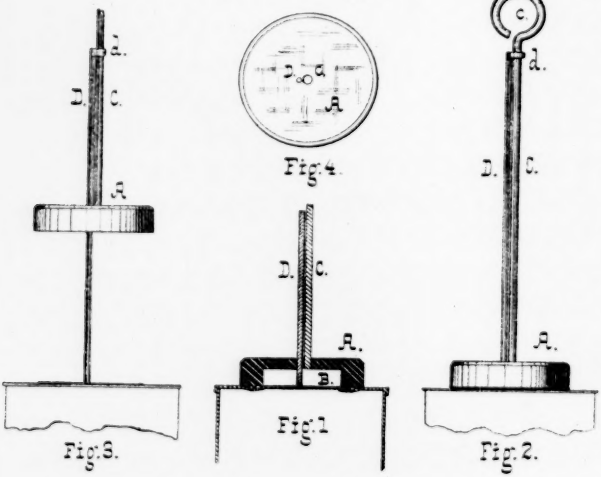
Now, therefore, these letters patent are to grant unto the said Edward M. Lang, his heirs or assigns, for the term of seventeen years, from the seventeenth day of May, one thousand eight hundred and seventy, the exclusive right to make, use, and vend the

61

A. BARKER,
Assignor to E. M. Lang.
Soldering Device.

No. 8,781. Reissued July 1, 1879.

No. 250.
McMurray et al
v.
Mallory et al
page 61



Witnesses,
W. A. Bertram.
H. L. C. Barclay.

Inventor
- ABEL BARKER -
by
R. D. Williams.
Attorney.

said invention throughout the United States and the territories thereof.

In testimony whereof, I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the city of Washington, this first day of July, in the year of our Lord one thousand eight hundred and seventy-nine, and of the independence of the United State the one hundred and third.

[SEAL OF THE PATENT OFFICE.]

A. BELL,
Acting Secretary of the Interior.

Countersigned:

H. E. PAINE,
Commissioner of Patents.

(Here follows diagram, marked page 61.)

62 UNITED STATES PATENT OFFICE.

ABEL BARKER, OF WYOMING, PA., ASSIGNOR TO EDWARD M. LANG.

Improvement in Soldering Devices.

Specification forming part of Letters Patent No. 103,125, dated May 17, 1870; Re-issue No. 6,846, dated January 11, 1876; Re-issue No. 8,781, dated July 1, 1879; applications filed April 15, 1879.

To all whom it may concern:

Be it known that I, Abel Barker, of Wyoming, in the county of Luzerne, and State of Pennsylvania, have invented certain new and useful improvements in Soldering-Machines; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical central sectional view of the device; Fig. 2, a representation of the machine as applied to the can in opening; Fig. 3, as applied in closing or sealing, with the disk withdrawn and the sliding rod pressed upon the cover to hold it until the solder or sealing material hardens. Fig. 4 is a plan view of the disk.

The purpose of my invention is to provide a convenient machine or device for opening and sealing fruit, oyster, or other cans adapted to be hermetically sealed.

In constructing the machine I make the disk, casting, or tool A of sufficient thickness to retain the heat, and of suitable size to cover the lid or cap of the can, with the recess B in the under side to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover. To this disk I connect the handle C, which has a handle, *c*, for convenience in rotating the soldering iron.

In connection with the handle I use the small rod or wire D, which passes through the soldering iron or disk A, so as to admit of the latter being rotated about or slid up and down upon the rod. The rod is connected to the handle C by a collar, *d*, embracing the latter.

In opening a can, the tool of iron A is sufficiently heated to melt the solder, when it is placed over the cover until the solder is com-

pletely melted, and the cap is then removed by any sharp-pointed instrument.

In closing or sealing a can, the cover or cap is to be placed in proper position upon the can and solder is laid upon the edge of the cover. The rod D is pushed down through the tool and placed upon the cover to hold it. The heated disk or iron is then pushed down in contact with the solder or sealing material until it is melted, and then turned back and forth until the solder is spread evenly around the edge of the cover. The disk is then to be withdrawn with the rod still pressed upon the lid until the solder or sealing material sets or hardens, when the operation is completed.

Having thus described my invention, what I claim as new, and desire to secure by letters patent, is—

1. In a soldering machine, a rod adapted to hold the can cap or lid in a place, in combination with a soldering iron mounted upon and arranged to be rotated about said rod, substantially as described.

2. In a soldering machine, a rod adapted to hold the can cap or lid in place, in combination with a soldering iron sliding upon said rod and adapted to be rotated about it, as set forth.

3. In combination with a soldering tool or die, the rod D, in passing through said tool or die to hold the can cap or lid in the process of soldering, substantially as described.

4. In a soldering machine, the combination, with a soldering tool conforming in shape to the cap to be soldered, of an independently movable rod, D, upon which the said tool is mounted, substantially as described.

5. The disk, or tool A, with the recess B in its under side, in combination with and mounted upon the independently movable rod or wire D, as set forth.

ABEL BARKER.

Witnesses:
G. M. RICHART.
JAS. L. POLEN.

63 *Complainants' Exhibit—"Bostwick Original Patent."*

Department of the Interior, United States Patent Office.

To all persons to whom these presence shall come, greeting:

This is to certify, that the annexed is a true copy from the records of this office, of the letters patent granted Jabez A. Bostwick, June 21, 1870, No. 104,412, for improvement in soldering iron.

In testimony whereof, I, H. E. Paine, Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this thirty-first day of October, in the year of our Lord one thousand eight hundred and seventy-nine, and of the independence of the United States the one hundred and fourth.

[SEAL.] H. E. PAINE,
Commissioner.

J. A. Bostwick 66

Soldering Iron.

No. 104,112. Patented June 21, 1870.

No. 250
McMurray et al
Mallory et al
page 66

Fig. 1.

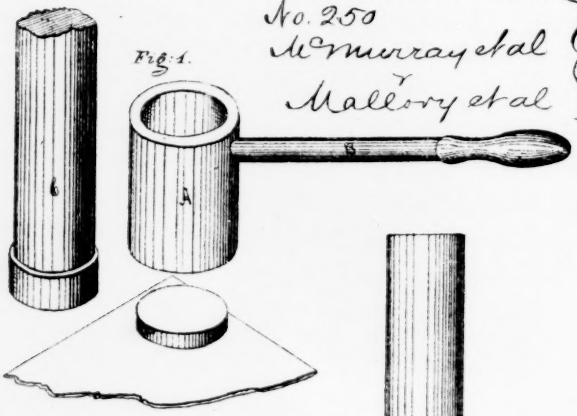
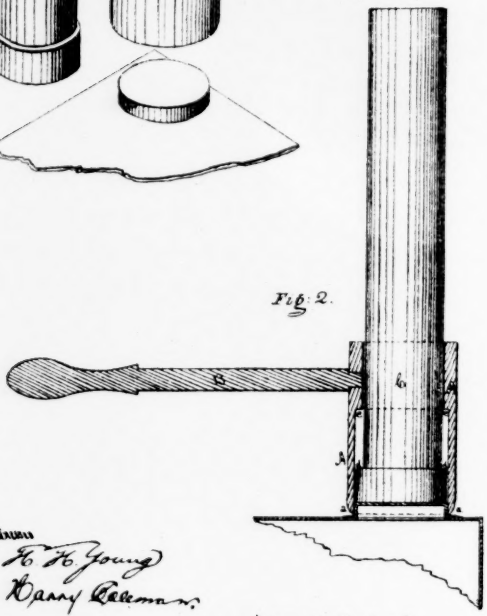


Fig. 2.



Witnesses
H. H. Young
Harry Coleman

Inventor
Jabez A. Bostwick

Attorney
David A. Burr

64 No. 104,412.

THE UNITED STATES OF AMERICA.

To all to whom these Letters Patent shall come:

Whereas Jabez A. Bostwick, of New York, New York, has alleged that he has invented a new and useful

Improvement in Soldering Iron,

and has made oath that he is a citizen of the United States; that he verily believes he is the original and first inventor or discoverer of the said improvement, and that the same hath not to his knowledge and belief been previously known or used, has paid into the Treasury of the United States the sum of thirty-five dollars, and presented a petition to the Commissioner of Patents praying that a patent may be issued therefor.

These are therefore to grant to the said Jabez A. Bostwick, his executors, administrators, or assigns, for the term of seventeen years from the twenty-first day of June, one thousand eight hundred and seventy, the full and exclusive right and liberty of making, using, and vending to others to be used, the said im-
65 provement, a description whereof is given in annexed schedule and made a part of these presents.

In testimony whereof, I have caused these letters to be made patent, and the seal of the Patent Office to be hereunto affixed.

Given under my hand at the city of Washington, this twenty-first day of June, in the year of our Lord one thousand eight hundred and seventy, and of the independence of the United States of America the ninety-fourth.

[SEAL.]

W. T. OTTO,
Acting Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.

S. H. HODGES,
Acting Commissioner of Patents.

(Here follows diagram marked page 66.)

67 UNITED STATES PATENT OFFICE.

JABEZ A. BOSTWICK, of New York, N. Y.

Letters Patent No. 104,412. Dated June 21, 1870.

Improvement in Soldering Iron.

The schedule referred to in these Letters Patent, and making part of the same.

I, Jabez A. Bostwick, of the city, county, and State of New York, have invented a new and useful soldering iron for soldering metallic caps, or other projecting pieces on metallic vessels, of which the following is a specification:

My invention relates to the construction and use of a hollow

soldering iron for soldering metallic caps, or other projecting pieces, upon metallic oil cans or other vessels, said iron, when made with an inclosing edge of the dimensions and form of the rim or edge of the cap or piece to be soldered, so as to conform thereto when placed thereon, and so extended and formed interiorly as to receive and embrace loosely a guinding rod to be placed upon the cap to be soldered, to hold the latter down firmly until it has been secured by the solder, and at the same time guide the iron to its proper place upon or against the rim or edge of the cap.

68 Figure 1 is a view in perspective of my improved soldering iron, and of a cap placed upon a metallic can to be soldered.

Figure 2 is an elevation of the guiding rod.

Figure 3 is a sectional view of the soldering iron placed upon the cap, so as to solder the same with its guiding iron in place to hold it down and guide the iron in its operation.

A is my improved soldering iron, made of a cylindrical form, to solder circular caps, &c. It consists of a cylinder of metal, made thick to retain heat, and hollow to fit over and inclose the projection of the metallic cap to be soldered thereby, its inner diameter at its lower end being somewhat greater than the external diameter of said cap.

It is provided with a handle, B, secured thereto, near its upper end, guarded, as usual, with wood or other non-conductor of heat.

Its lower rim, *a a*, is beveled, so as to present a narrow edge to hold the solder in applying the same to the joint.

The inner diameter of its upper end is made smaller than that of its lower end, so as to form a shoulder, *e*, therein, about midway of its length.

C is a rod ,whose lower end is of a diameter about equal to

69 that of the cap or projection to be soldered, but which is reduced in diameter above the same, so as to form a projecting offset or shoulder, *b*, a counterpart of that, *e*, within the soldering iron.

After the iron has been properly heated [it] is slipped over this rod, and the rod being then placed upon the cap, is held thereon firmly, while the lower rim of the heated iron, duly supplied with solder, bearing upon the joint of the cap with the vessel, will instantly solder and secure the same about its entire circumference.

By lifting the rod, its shoulder, engaging with the offset within the iron, will take up the latter with it in readiness to be placed upon another cap, and thus a number of caps may quickly and thoroughly [be] soldered at one heat of the iron.

I contemplate making the soldering-iron A, and its guiding rod C, of any form in transverse section which may be required, to cause it to fit upon any form of cap or other projection, whether round, square, oval, or of any other curved or polygonal shape. Its lower rim or edge need not be made continuous, but may be broken or slotted.

73

J. A. BOSTWICK.

Assignor to E. M. Lang & Co.

Soldering Iron.

No. 8,466. Reissued Oct. 29, 1878.

No. 250
M. Murray et al
v.
Mallory et al
Page 73

Figure 2.

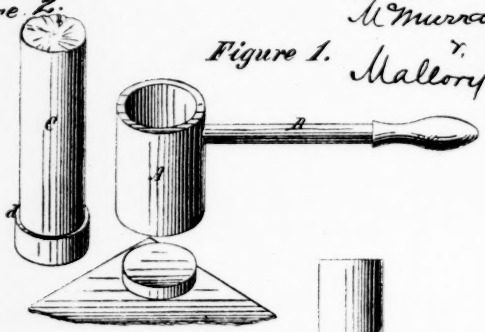


Figure 1.

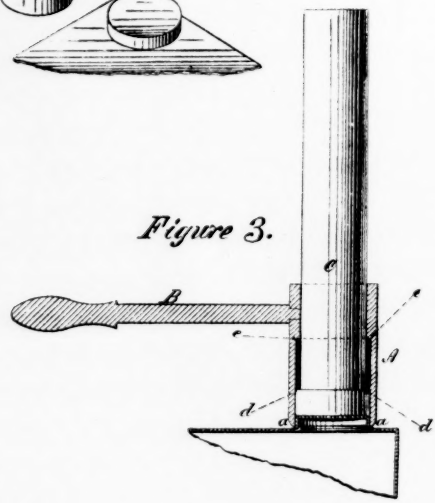


Figure 3.

Witnesses:

George W. Miatt
James C. Tearney

Inventor:

J. A. Bostwick
By David A. Burr
Atty.

I claim as my invention —

The hollow soldering iron A, having a handle, B, and leveled rim *a a* in combination with the rod G, substantially as herein described and set forth.

70

J. A. BOSTWICK.

Witnesses:
CHAS. W. JONES.
W. H. TILFORD.

71 *Complainants' Exhibit "Bostwick Re-issue."*

Re-issue.

THE UNITED STATES OF AMERICA.

No. 8466.

To all to whom these presents shall come:

Whereas Jabez A. Bostwick, of New York, New York, assignor to E. M. Lang & Co., of Portland, Maine, has presented to the Commissioner of Patents a petition praying for the re-issue of letters patent for an alleged new and useful

Improvement in Soldering Irons,

for which letters patent were issued to him, dated June 21, 1870, which letters having been surrendered, the same have been canceled and new letters ordered to issue to said assignees on an amended specification, a description of which invention is contained in the specification, of which a copy is hereunto annexed and made a part hereof, and has complied with the various requirements of law in such cases made and provided. And whereas, upon due examination made, the said claimant is adjudged to be justly entitled to a patent under the law.

72 Now, therefore, these letters patent are to grant unto the said E. M. Lang & Co., their heirs or assigns, for the term of seventeen years from the twenty-first day of June, one thousand eight hundred and seventy, the exclusive right to make, use, and vend the said invention throughout the United States and the Territories thereof.

In testimony whereof, I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the City of Washington, this twenty-ninth day of October, in the year of our Lord one thousand eight hundred and seventy-eight, and of the independence of the United States of America the one hundred and third.

[SEAL.] A. BELL,
Acting Secretary of the Interior.

Countersigned. W. H. DOOLITTLE,
Acting Commissioner of Patents.

(Here follows diagram marked page 73.)

74 UNITED STATES PATENT OFFICE.

JABEZ A. BOSTWICK, OF NEW YORK, N. Y.,

Assignor to E. M. Lang & Co., of Portland, Maine.

Improvement in Soldering Irons.

Specification forming part of Letters Patent No. 104,412, dated June 21, 1870; Re-issue No. 8,466, dated October 29, 1878; application filed September 3, 1878.

To all whom it may concern:

Be it known that I, Jabez A. Bostwick, of the city, county, and State of New York, have invented a new and useful Improvement in Soldering Irons, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a view in the perspective of my improved soldering iron and of a cap placed upon a metallic can to be soldered. Fig. 2 is an elevation of the guiding or pivotal presser-rod; and Fig. 3, is a sectional view of the soldering iron, placed upon the cap so as to solder the same, with the pivotal presser-rod in place to hold down the cap and guide the iron in its operation.

My invention relates to the construction of a tool for soldering the caps upon the tops of metallic cans which will admit of more easy and expeditious manipulation in performing the operation than the tools heretofore employed for this purpose.

It consists in the combination of an iron adapted to produce, when heated, a proper flow of solder along the joint of a can cap, with a central rod about which it may revolve, and which will serve the twofold purpose, first, of a pivot to limit and guide the soldering iron in its proper movement during the process of soldering; and, second, of a weight to press and hold down the cap during the operation and until it is fixed and retained by the solder.

In the accompanying drawing, A is a soldering iron consisting of a ring or cylinder of metal made thick to retain heat, and provided with a lower edge or face, *a*, beveled, and adapted to rest upon and follow the joint to be soldered, and to produce a proper flow of solder in and upon the same. This soldering edge *a* may be continuous and annular to embrace the cap, or it may form merely the arc of a circle, or be otherwise broken away to bear upon the joint at one or two points thereof, instead of continuously. The iron is provided with a handle, B, for removing it from can to can, or to and from the furnace, and by means whereof its movement about its central pivot rod and along the joint to be soldered is effected. This handle is guarded, as usual, with wood or other non-conductor of heat.

C is a rod, made heavy to serve as a weight to retain the cap in place while being soldered. Its upper end is of such diameter as to fit loosely within the upper annular portion or collar of the soldering iron, and its lower end is enlarged to form a shoulder, *d*, which,

when the rod is lifted, shall engage the counterpart projection *e* formed by the collar of the iron A.

In the operation of soldering with this tool, the weight or presser-rod C is placed centrally upon the cap which is to be secured, and the iron B, properly heated, is slipped over the rod, and, being brought thereby to bear upon the joint, is quickly turned or revolved about the rod as a pivot, so as to melt the solder at the joint and flow it to every part of the seam. So soon as this is accomplished the iron is lifted off from the presser-rod C, and either slipped over a second rod placed ready in position upon the next can, or, if necessary, is reheated for the purpose. In the meantime the presser-rod, remaining as a weight upon the can-cap which has been operated upon, will retain it in position until the solder of the joint is set and the cap thereby secured. The process of soldering may thus be very rapidly and effectively carried on without the need of a skilled workman.

The central rod thus serves not only as a guide to conduct the heated iron directly to the joint, but also as a pivot to determine and facilitate its ready movement along the joint, and as a loose weight to hold the cap in place until it is secured by the cooling of the solder.

If the presser-rod C be lifted instead of the soldering iron proper, the shoulder *d* on the rod, engaging the offset *e* of the collar within the iron, will serve to take up the latter, so that it may be thereby transferred to another can-cap. A number of cans may be in this manner soldered at one heat of the iron with but one presser-rod; but in such case the operator must first, after lifting the iron from the joint, pause a moment to allow the joint to set before lifting the rod itself from the can.

I claim as my invention—

1. A tool for soldering the caps on cans, consisting of a soldering iron revolving about a central pivotal rod, which is made to rest upon and steady the cap during the operation of soldering.

2. The combination of a hollow iron for soldering caps on cans with a separate and inclosed weight for steadying the cap on the can during the operation of soldering.

J. A. BOSTWICK.

Witnesses:

JAS. W. HALL,
DAVID A. BURR.

75 *Complainants' "Exhibit, Barker Assignment."*

(65.)

Department of the Interior, United States Patent Office.

To all persons to whom these presents shall come, greeting:

This is to certify that the annexed is a true copy from the record of this office of an assignment from E. M. Lang to McMurray, Lang, and Burnham, recorded in Liber K 24, page 161; and that said

annexed copy has been compared by me with the original, and that it is a correct transcript therefrom, and of the whole of the original.

In testimony whereof, I, H. E. Paine, Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this twenty-ninth day of October, in the year of our Lord one thousand eight hundred and seventy-nine, and of the independence of the United States the one hundred and fourth.

[SEAL.] H. E. PAINE,
Commissioner.

76 *Liber K* 24, *Page* 161.

This deed, made this 14th day of August, in the year of our Lord one thousand eight hundred and seventy-nine, by Edward M. Lang, of Portland, Maine.

Whereas the said Edward M. Lang is the owner of certain re-issued letters patent for an Improvement in "Soldering Devices," which said letters patent were originally issued to Abel Barker, and were numbered 103,125, and were dated the 17th day of May, 1870, and were re-issued on the 11th day of January, 1876, and were again re-issued to the said Edward M. Lang on the 1st day of July, 1879, and are numbered 8,781; and

Whereas the said Edward M. Lang has agreed to sell, assign, and convey the said re-issued letters patent to the firm of McMurray, Lang & Burnham:

Now, therefore, in consideration of the premises, and of the sum of one dollar, paid to the said Edward M. Lang, the receipt whereof is hereby acknowledged, the said Edward M. Lang hath sold, assigned, and conveyed, and by these presents doth sell, assign, and convey, unto Louis McMurray, Edward M. Lang, and George Burnham, Jr., trading under the name, firm, and style of McMurray, Lang & Burnham, all the right, title, and interest of the said Edward M. Lang in and to the letters patent aforesaid.

77 To have and to hold the same to and unto the use of the said McMurray, Lang & Burnham as fully and completely as the same would be held by the said Edward M. Lang had this instrument never been made.

Witness my hand and seal this 14th day of August.

EDWARD M. LANG. [SEAL.]

Test: ROBERT SMITH.

Recorded Aug. 16th, 1879. Ex'd, F. C. T.

78 *Complainants' Exhibit—"Bostwick Assignment."*

(65.)

Department of the Interior, United States Patent Office.

To all persons to whom these presents shall come, greeting:

This is to certify, that the annexed is a true copy from the records of this office, of an assignment from E. M. Lang, and Co., to

McMurray, Lang, and Burnham, recorded in liber K 24, page 162.

And that said annexed copy has been compared by me with the original, and that this is a correct transcript therefrom, and of the whole of the original.

In testimony whereof, I, H. E. Paine, Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this twenty-ninth day of October, in the year of our Lord one thousand eight hundred and seventy-nine, and of the independence of the United States the one hundred and fourth.

[SEAL.] H. E. PAINE,
Commissioner.

79 *Liber K* 24, *Page* 162.

This deed made this 14th day of August, in the year of our Lord one thousand eight hundred and seventy-nine, by Edward M. Lang and George Burnham, Jr., of Portland, Maine, trading under the name and style of E. M. Lang & Co.

Whereas the said E. M. Lang & Co. are the owners of certain letters patent of the United States for an "Improvement in Soldering Irons," which said letters patent were originally granted to Jabez A. Bostwick, on the 21st day of June, 1870, No. 104,412, and re-issued to the said E. M. Lang & Co. on the 29th day of October, 1878, and are numbered 8,466, and whereas the said E. M. Lang & Co. have agreed to sell, assign, and convey the same to the firm of McMurray, Lang, and Burnham:

Now, therefore, in consideration of the premises, and of the sum of one dollar, cash paid to the said E. M. Lang & Co., the receipt whereof is hereby acknowledged, the said E. M. Lang & Co. have sold, assigned, and conveyed, and by these presents do sell, assign, and convey unto Louis McMurray, Edward M. Lang, and George Burnham, Jr., trading under the name and style of McMurray, Lang, and Burnham, their successors, personal representa-
80 tives, and assigns, all the right, title, and interest of the said E. M. Lang & Co. in and to the letters patent aforesad.

To have and to hold the same to and unto the use of the said McMurray, Lang & Burnham, their successors, persoual representatives, and assigns, as freely and completely as the same would be held by the said E. M. Lang & Co. had this instrument never been made.

Witness our hands and seals this 14th day of August, 1879.

E. M. LANG & CO. [SEAL.]
EDWARD M. LANG. [SEAL.]
GEO. BURNHAM, JR. [SEAL.]

Test: ROBERT SMITH.

Recorded Aug. 16th, 1879. Ex'd, F. C. T.

81 *Clompl't's Exhibit—"R. D. Williams," No. 1.*

(2—175.)

Department of the Interior, United States Patent Office.

To all persons to whom these presents shall come, greeting:

This is is to certify that the annexed is a true copy from the records of this office of an official letter, under date of January 9th, 1880, in the matter of the model filed with the application of J. A. Bostwick, on which letters patent No. 104,412 were granted June 21, 1870, for "Soldering Iron."

In testimony whereof, I, W. H. Doolittle, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this ninth day of January, in the year of our Lord eighteen hundred and eighty, and of the independence of the United States the one hundred and fourth.

[SEAL.] W. H. DOOLITTLE,
Acting Commissioner.

82 DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
WASHINGTON, D. C., *Jan. 9th*, 1880.

SIR: In reply to your letter of to-day's date asking information in relation of the model filed with the application of J. A. Bostwick, on which letters patent No. 104,412 were granted June 21st, 1870, for "Soldering Iron," you are informed that said model was destroyed by the fire which occurred in this office Sept. 24th, 1877.

Very respectfully, F. A. SEELY,
Chief Clerk.

R. D. WILLIAMS, Esq., Baltimore, Md.

83 *Compl't's "Exhibit,"—R. D. Williams No. 2.*

(2—175.)

Department of the Interior, United States Patent Office.

To all persons to whom these presents shall come, greeting:

This is to certify, that the annexed is a true copy from the records of this office of an official letter under date of January 9th, 1880, in the matter of the model filed with the application of Abel Barker, on which letters patent No. 103,125, were granted May 17th, 1870, for "Can Opener."

In testimony whereof I, W. H. Doolittle, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this ninth day of January, in the year of our Lord one thousand eight hundred and eighty, and of the independence of the United States the one hundredth and fourth.

[SEAL.] W. H. DOOLITTLE,
Acting Commissioner.

87

L. McMURRAY & R. J. HOLLINGSWORTH.

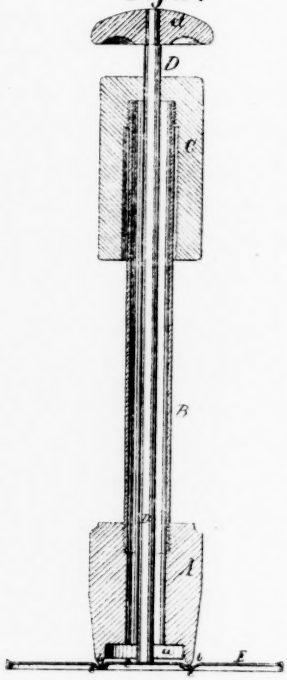
Improvement in Soldering Tools.

No. 115,760. Patented June 6, 1871.

No. 250
McMurray et al
v.
Mallory et al
} page 87

Fig 1.

Fig 2.



Witnesses:
James Flynn
Ethel Schnerb

Inventors:
Louis McMurray
Robert J. Hollingsworth

84 DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
WASHINGTON, D. C., *Jan. 9th*, 1880.

SIR: In reply to your letter of to day's date, asking information in relation to the model filed with the application of Abel Barker, on which letters patent 103,125, were granted May 17th, 1870, for "Can Opener," you are informed that said model was destroyed by the fire which occurred in this office Sept. 24th, 1877.

Very respectfully,
F. A. SEELY, *Chief Clerk.*

R. D. WILLIAMS, ESQ., *Baltimore, Md.*

85 *Complainants' Exhibit—"McMurray Patent."*

No. 115,760.

THE UNITED STATES OF AMERICA.

To all to whom these letters patent shall come:

Whereas Louis McMurray and Robert I. Hollingsworth, of Baltimore, Maryland, have alleged that they have invented a new and useful inprovement in soldering tools, and have made oath that they are citizens of the United States, that they verily believe they are the original and first inventors, or discoverers of the said improvement, and that the same hath not to their knowledge and belief been previously known or used, have paid into the Treasury of the United States the sum of thirty-five dollars, and presented a petition to the Commissioner of Patents praying that a patent may be issued therefor.

These are therefore to grant to the said McMurray and Hollingsworth, their executors, administrators, or assigns, for the term of seventeen years from the sixth day of June, one thousand
86 eight hundred and seventy-one, the full and exclusive right and liberty of making, using, and vending to others to be used, the said improvement, a description whereof is given in the annexed schedule, and made a part of these presents.

In testimony whereof, I have caused these letters to be made patent and the seal of the Patent Office to be hereunto affixed.

Given under my hand, at the City of Washington, this sixth day of June, in the year of our Lord one thousand eight hundred and seventy-one, and of the independence of the United States of America the ninety-fifth.

[SEAL.]

B. R. COWEN,
Acting Secretary of the Interior.
M. D. LEGGETT,
Commissioner of Patents.

Countersigned and sealed with the seal of the Patent Office.

(Here follows diagram marked page 87.)

88

115,760.

UNITED STATES PATENT OFFICE.

LOUIS MCMURRAY AND ROBERT J. HOLLINGSWORTH, OF BALTIMORE, MD.

Improvement in Soldering Tools.

Specification forming part of Letters Patent No. 115,760, dated June 6, 1871.

We, Louis McMurray and Robert J. Hollingsworth, of the city and county of Baltimore, and State of Maryland, have invented certain improvements in a Soldering Tool, of which the following is a specification:

Our invention consists of an improvement in the construction of the soldering tool for which letters patent were granted to J. A. Bostwick on June 21, 1870, by providing the soldering iron with a vertical hollow stem through which the pressed rod plays, guided in the handle of the stem, as will be generally explained in the following description, and specifically pointed out in the claim.

In the annexed drawing, Figure 1 is an elevation of our improved soldering tool. Fig. 2 is a vertical section of the same, showing the mode of operation.

The iron A is a short block, having a recess, *a*, formed in one end corresponding in outline with the caps which the tool is designed to solder to tin fruit cans and the like. The rim *b*, bounding the recess, is beveled to an edge, or nearly so. An aperture is formed through the block A longitudinally, which is tapped at the end opposite to the recess *a* to receive the hollow stem B which is screwed into it. The block and stem may be formed in one piece, if preferred, but both must always be hollow. The outer end of the hollow stem is screwed into a wooden handle, C, in which a presser rod, D, is snugly fitted. This presser rod passes through the hollow stem into the iron to press upon the cap and hold it firmly to the top of the can while being soldered to the latter. It is made of sufficient length to extend a short distance above the handle C when it rests on the cap, and terminates in a wooden knob, *d*, on which to press with the palm of the hand or with one finger, while the iron may be turned at the same time with the other fingers of the same hand, taking hold of the handle C. When the iron A is to be heated the presser rod D is drawn out of it a sufficient distance into the hollow stem so that it will not be affected by the fire to any extent.

In applying the tool, as shown in Fig. 2, the presser rod is projected through the iron A to first press the cap *c* down on the can top E. The handle C is then pushed down on the rod to bring the edge of the iron in contact with the solder *e*, in the crease of the can top, and fuse it. The iron is lifted off the can top a moment before the presser rod is, so as to allow the solder to set while the cap is still being pressed to the can.

The greater utility of this tool over that patented by Bostwick consists in its compactness, and that it can be operated with one hand.

What I claim as my invention, and desire to secure by letters patent, is—

The combination of the tubular soldering iron A, hollow stem B, handle C, and presser rod D, which is guided in the handle to play through the stem and soldering iron, substantially in the manner set forth.

LOUIS McMURRAY.
ROBERT J. HOLLINGSWORTH.

Witnesses:
JAMES FLYNN.
GOTTLEIB JEHNERT.

89 *Defendants' Testimony.*

Feburary 18th, 1880.—Commission met. All counsel present.

Louis McMurray.

LOUIS MCMURRAY, a witness produced on behalf the defendants, being duly sworn, deposes and says, as follows:

1st Interrogatory. Please state you name, age, residence, and occupation?

Answer. My name is Louis McMurray; I am fifty-seven years of age; I reside 263 W. Biddle street, Baltimore; I am a packer of hermetically sealed goods in tin.

2d Inter. Are you one of the complainants in this case?

A. I am.

3d. Inter. Are you a member of the firm of McMurray, Lang & Burnham?

Ans. I am in regard to soldering tools or capping irons.

4th. Int. How long has that firm been formed?

Ans. In August, 1879.

5th Inter. What been been the business of that firm since it was formed?

Ans. In looking after the interests they had in capping tools and soldering irons.

6th Inter. What is the object of the firm in looking after this interest?

Ans. To protect the patents they now own from being infringed upon?

7th Inter. What other business, if any, does the firm conduct?

Ans. No other business.

90 8th Inter. What patents does it own?

Ans. It owns the Bruce, Barker, Bostwick, McMurray, and Lang.

9th Inter. The firm then was organized for the purpose of getting control of and managing these patents.

Ans. The different members had control of the patents before the firm was organized.

10th Inter. In what way, if any, can the firm realize profits out of these patents?

Ans. By royalties from persons infringing upon them.

11th Inter. Is this the only way of realizing profits?

Ans. This is the only way the firm can realize profits, except by selling the machines or irons to different persons.

(Counsel for complainants at this point objects to the whole of Mr. McMurray's testimony.)

12th Inter. Has the firm sold any of the Bostwick or Barker irons, and if so, to whom, and when? (Objected to.)

Ans. They never have sold any.

13th Inter. Has the firm granted a license to any person to use those irons, and if so, to whom and when?

Ans. They never have granted any license to any person.

14th Inter. The Barker and Bostwick patents then, if I understand you properly, will be of no profit to the firm, unless the validity of those patents be established, and the irons are sold or used?

Ans. The firm might conclude to conduct other business, which would require those irons, and that would be a source of profit.

15th Inter. Unless the firm did this, could it have any other source of profit from these patents? (Objected to.)

Ans. If they did not sell, received no royalty, and did not use them themselves in business, there could be no profits; I understand a royalty to be a license.

16th Inter. State whether or not the firm has it in contemplation to use those irons in a business to be conducted by itself? (Objected to.

91 Ans. I am not able to state at present.

17th Inter. I repeat the question; has the firm contemplated using those irons in a business to be conducted by the firm? (Objected to.)

Ans. We have made no arrangements, but we might in the future make some arrangements.

18th Inter. What is the distinction, if any, between the business conducted by Louis McMurray & Co., of which firm you are a member, and that conducted by D. D. Mallory & Co.?

Ans. I do not know Mr. Mallory's business entirely, I do not know that I ever was in his establishment—if I was, I was only in his office—I know his business by reputation to be packing hermetically sealed goods. Louis McMurray & Co.'s business is also packing hermetically sealed goods.

19th Inter. What patent irons do Louis McMurray & Co. use for soldering caps on their cans?

Ans. I here produce them.

(Counsel for respondents object to the production of the irons as

not being an answer to the question, they do not propose to file the irons at least at this stage of the case.)

(Counsel for complainants objects to the counsel for respondents stopping his own witness in the middle of his answer.)

20th Inter. Under what patents are the irons used by Louis McMurray & Co. made?

Ans. I have capped up cans by the Barker, Bostwick, and L. McMurray's patents.

21st Inter. Under what patents are the irons made now used by Louis McMurray & Co.?

Ans. The larger bulk of the goods are capped by L. McMurray's patent. We capped some by the Barker patent, and by the Bruce and Bostwick. I have cans in the Examiner's office to show the workmanship of the Barker and Bruce patents.

92 (The last part of the answer objected to by counsel for defendants, as not being responsive.)

22d Inter. What proportion of your canning is done by the L. McMurray patent?

Ans. The greater portion is capped by the McMurray patent, as my arrangement was made for capping before I went into co-partnership with Lang & Burnham.

23d Inter. Had you or not used irons made from the Barker or Bostwick patents, prior to forming a partnership with Lang and Burnham?

Ans. The irons that I had made in 1870 were identical with Barker's patent.

24th Inter. What time in 1870 did you have that made?

(Ojected to, unless the iron be produced.)

Ans. In September or October.

25th Inter. The question is, whether prior to August last you used irons, practically in your business, made after the Barker or Bostwick patents?

Ans. We used practically the soldering iron made identically after the Barker patent, in the spring of 1871, I think for two years, and have occasionally used them since, and find them to be one of the best irons I ever used. (All after the word "find," objected to by counsel for defendants, as not being responsive.) I have not alluded to the full description of the handle of the Barker patent; it varies a little from the one I use, but it is essentially the same. I have not used the Bostwick patent prior to August last, except they claim the centre rod, which I use in my patent, obtained in 1871.

26th Inter. Why did you discontinue the use of the Barker iron, after two years' use?

Ans. I have made other inventions that enabled unskilled labor

to cap up a greater number of cans per day than I thought the Barker patent was able to do.

27th Inter. Why have you never used the Bostwick patent?

93 Ans. I have obtained so many patents on that subject that I selected one of my own patents, which I thought was the best for my own use.

28th Inter. How many cappers are at this time employed by Louis McMurray & Co., and how many of them use the Barker patent, and how many use the Bostwick patent, daily?

Ans. During last packing season about ten were using the McMurray patent, and there were some other devices used by about two.

29th Inter. What devices were these two?

Ans. They had an upright centre rod in them, with a rotary motion of the can.

30th Inter. State whether or not you paid any royalty or license fee for the use of the Barker iron at the time you used it? (Objected to.)

Ans. I was notified, and I never thought that I had infringed the Barker patent until last August, after reading over the specifications in the patent. I did not pay any royalty, thinking it was my own patent that I was working.

31st Inter. When were you first notified about the Barker patent?

Ans. There was a little printed slip sent to me; it was several years ago; I can't recollect when.

32d Inter. What is your proportion of interest in the Barker and Bostwick patents? (Objected to.)

Ans. Lang, Burnham, and myself own it in three equal parts jointly, I think.

33d Inter. What did your interest in those two patents cost you?

Ans. They cost me all my patents, which had cost me a pretty heavy amount. The amount of money was not definitely decided upon.

34th Inter. Did you pay any money for an interest in these patents, except what was needed to carry on this suit? (Objected to.)

Ans. I have agreed to pay five hundred dollars, and some other amounts paid for patents.

94 35th Inter. How much money outside of the money necessary to carry on this suit have you already paid, for an interest in these two patents? (Objected to.)

Ans. I can't answer the question without referring to my books.

36th Inter. How much as near as you can remember? (Objected to.)

Ans. I could not begin to say.

37th Inter. As much as an hundred dollars? (Objected to.)

Ans. I cannot say.

38th Inter. Upon what condition is the $500 spoken of to be paid? (Objected to.)

Ans. I am to give that to Lang and Burnham for my portion of expenses in purchasing patents, with all my patents besides.

39th Inter. State whether or not it was not agreed that this $500 is to be paid only upon condition that you win this suit? (Objected to.)

Ans. No, it was to be paid; and I have advanced more than is sufficient.

40th Inter. Do I understand you now to say that you have already paid this $500 in money? (Objected to.)

Ans. It was to be paid, and I advanced some money for other patent purposes, more than enough to pay that portion; the only question was whether they would receive so small an amount as $500 from me.

41st Inter. Whether who would receive so small an amount? (Objected to.)

Ans. Lang thought I ought to give equal with the rest for the patents which he had bought. Lang wanted one-third of the amount the patents cost him, as my proportion, and he thought he ought to receive more than $500.

42d Inter. What did the Barker and Bostwick Patents cost Lang? (Objected to.)

Ans. From what Lang has told me, the Barker Patent was to be $1,800, the Bostwick Patent was to be $500, to the
95 best of my memory, and the Bruce Patent was to be three, four, or five hundred dollars, with additional expenses that they were at in procuring them, which I think amounted for Barker and Bostwick Patents in all to about $2,500, and he wanted one-third of that from me, or nearly so.

43d Inter. State whether or not the purchase money for these patents is to be paid only upon condition that this suit is successful. (Objected to.)

Ans. My impression is that all or a greater part has already been paid; I think none of it is contingent on the success of this suit.

44th Inter. Was it or not agreed between you and Lang and Burnham that you should pay no money for any of these patents, except for expenses of this suit, unless the suit is successful?

Ans. I was to pay $500 anyhow, whether successful or not.

45th Inter. State whether or not this $500 was to be used in expenses and fees in prosecuting this suit?

Ans. The $500 was to be paid without regard to this suit at all, and probably a little addition to it.

46th Inter. Under the agreement between you and Lang and Burnham, do you contribute toward the expenses of this suit in addition to that $500?

Ans. I do.

47th Inter. Is the agreement between you and Lang and Burnham, in relation to these patents, in writing?

A. We have an agreement in writing.

48th Inter. How many agreements in writing have you concerning this suit and patents?

Ans. I think we have only one agreement for the partnership concern.

49th Inter. Please produce that agreement to be filed with the examiner.

Ans. I shall not produce it unless instructed by my counsel.

96 50th Inter. State whether or not it was agreed between you and Lang and Burnham that unless you gain this suit the interests in your own patents conveyed by you to the firm are to be reconveyed to you?

Ans. There was no such agreement to my knowledge.

51st Inter. Did you or not reserve to yourself and your house the right to use your iron and the other patents free of charge by the firm? (Objected to.)

Ans. I shall not answer the question in reference to my private business unless my counsel so instructs me.

52d Inter. Does the firm of Louis McMurray & Co. pay any license fee or royalty to the firm of McMurray, Lang & Burnham for the use of any of these irons? (Objected to.)

Ans. We have never paid any.

53d Inter. State whether or not the payment of $500, spoken of by you, included an interest in the Bruce and Lang patents as well as in the Barker and Bostwick patents?

Ans. It did not include Bruce's patent.

54th Inter. Did it Lang's?

Ans. It did—that is, Lang's patent for capping irons.

55th Inter. When did the firm buy the Bruce patent?

Ans. I can't remember the exact date.

56th Inter. Was it before or after this suit was instituted?

Ans. It was after this suit was instituted.

57th Inter. What kind of goods, if any, has Lang been in the habit of selling to oyster and fruit packers for several years past? (Objected to.)

Ans. I can't tell what Mr. Lang's business is. About ten years ago he sold me some wire solder; he has sold me nothing for seven or eight years.

58th Inter. By what name is the iron now shown you, marked Ewalt & Tillery model, and heretofore filed in this cause, called?

Ans. It is known as the Ewalt & Tillery iron.

97 59th Inter. What packers in Baltimore city, besides D. D. Mallory & Co., use this iron, and how long have they been using it, to your knowledge? (Objected to.)

Ans. I don't know of any, except from reputation; I know from reputation that D. D. Mallory & Co. use it, and that is all I do know.

60th Inter. How long since you first heard that D. D. Mallory used this iron?

Ans. I have seen his circulars, and from reputation he has used it for six or seven years.

61st Inter. Do you mean that you heard six or seven years ago that he was using that iron?

Ans. I do.

62d Inter. Did not Lang and Burnham also know that D. D. Mallory & Co. were using this iron for the last six or seven years, and have they not known it ever since D. D. Mallory & Co. commenced to use it?

Ans. That I cannot answer—what they know.

63d Inter. Did not Lang ask you five or six years ago to join with him and purchase the Barker and Bostwick patents, and did he not then tell you, that D. D. Mallery & Co. and Evans, Day & Co., and Platt & Co., and others, were using the Ewalt & Tillery iron. (Objected to.)

Ans. He asked me about purchasing the iron when he purchased it, but as regards to packers using the irons, I have no recollection.

64th Inter. What irons, as you have been informed, all the time within six or seven years, have Evans, Day & Co., and Platt & Co., and most of the other packers in Baltimore, been using?

Ans. I have not been informed anything about their business at all.

65th Inter. Have you never heard what irons these packers mentioned use, directly or indirectly? (Objected to.)

Ans. I have frequently heard that they used irons, but to point out any one of them, and say what kind of irons he uses, I am not able to do.

98 66th Inter. Please file the iron patented by you and used in your business?

Ans. I herewith file two irons marked McMurray No. 1, and 2, and 3. No. 1 is used by placing the iron weights on the top of the cap, and the soldering iron is then placed over the weight during the operation of soldering. No. 2, I wish to say, is a *fac simile* to the iron I made in the fall of 1870, and patented on the 6th day of June, 1871. No. 3 is an iron patented by me, the date of which I forget.

67th Inter. Do you now use the iron made after the model of No. 3, in your business?

Ans. I do not in all its particulars.

68th Inter. Do you use the iron made after model No. 1?

Ans. I do.

69th Inter. Do you use the iron made after model No. 2?

Ans. Not generally.

Cross-examined by Mr. PRICE:

1st Cross-Interrogatory. I notice on the iron marked Defendants' Exhibit McMurray No. 1, a disc at the top of the soldering iron proper, and at its junction with the rod—what is that disc for?

(Objected to unless the complainants make the witness their own witness, as the respondents have not examined the witness as an expert, nor is the question brought out by anything on direct examination.)

Answer. We have a stove made with hollow places in it, out of cast iron, and these irons are placed in these hollow places, and the disc on top of it is to hold it in those hollows while being heated, and prevents it from coming in contact with any direct fire.

2d Cross-Inter. Do you know practically how that iron is worked in the process of soldering cans?

Ans. I do.

3d Cross-Inter. Explain it if you please.

Ans. A dozen cans are placed on a board, the caps are placed on them—the cast iron weight is placed on each cap, and the sol-
99 der is placed in the groove of the can, and the iron is placed over the weight, and in the groove of the can, and the iron is rotated about to spread the solder evenly in the groove, around the edge of the cap; the weight holds the lid down while the operation is going on and until the solder becomes cold.

4th Cross-Inter. I understand you, that after one can is thus capped, you lift the iron off and leave the weight remaining, placing the tool upon other cans in succession, until the operation of soldering the whole is completed.

Ans. That is what I mean.

5th Cross-Inter. Do you know how the tool is worked, represented by Defendants' Exhibit, McMurray, No. 2, and if yea, describe the operation of that tool?

Ans. The cans are filled, caps are put on them, solder is placed around the edge of the caps—the soldering iron is placed in the groove of the cap, rotated sufficiently to melt the solder and evenly spread it around, the iron is slightly raised while the rod in the centre is held down on the cap of the can until the solder is cool.

6th Cross-Inter. During a part of your examination-in-chief you have testified about the use of solder, of wire solder; have you any specimens of wire solder, as used in your business; and if yea, will you produce them? (Objected to.)

Ans. I herewith produce specimens of solder wire, marked Complainants' Exhibit, No. 4, and also a couple of cans and several loose caps—Complainants' Exhibit, McMurray, No. 5. The cap is placed upon the can, the wire solder laid in the groove, and the process of soldering with the tool is proceeded with as I have before described.

LOUIS McMURRAY.

Subscribed and sworn to before me this 18th day of February, 1880.

ISAAC A. BROOKS, JR.,
Examiner.

Then adjourned to February 19th, 1880.

100 February 17th, 1880.—Commission met. All counsel present.

D. D. Mallory.

D. D. MALLORY, a witness produced on behalf of defendants, after being duly sworn, deposes and says, as follows:

1st Interrogatory, State your name, age, residence, and occupation?

Answer. My name is D. D. Mallory; I am forty-two years of age; I reside in Baltimore city; I am an oyster and fruit packer: I am one of the defendants, and am a member of the firm of D. D. Mallory & Co; I have been in business under the name of D. D. Mallory & Co., since 1865.

2d Inter. What patent iron for soldering caps on cans does your firm use, if any, and how long has the firm used them?

Ans. We use what is known as the Ewalt & Tillery iron; the iron we use is the same as Exhibit Ewalt & Tillery, already filed in this case; our firm has been using them ever since the issuing of the patent; the firm does not, nor has not used any other iron than that mentioned above, except to experiment on.

3d Inter. What interest, if any, have you in the Ewalt & Tillery patent?

Ans. I am two-thirds owner.

4th Inter. Are you acquainted with the complainants in this case, and if so, how long have you known them, respectively in this case?

Ans. I am acquainted with McMurray and Lang, I think I have met Burnham once or twice; I have known McMurray for fifteen years; I have known Mr. Lang from eight to ten years.

5th Inter. What character of goods, if any, has Lang been selling to the oyster and fruit trade of Baltimore city, at any time during the last seven or eight years? (Objected to.)

101 Ans. I know of nothing except solder for capping purposes.

6th Inter. To whom has he sold solder? (Objected to.)

Ans. I have often heard him speak of selling solder to Louis McMurray, and he has sold it to our firm.

7th Inter. What knowledge, if any, had these complainants of your use of the Ewalt & Tillery iron, and how long have they had that knowledge? (Objected to.)

Ans. Lang has had that knowledge ever since it was patented; he took quite an interest in it when we were getting it up, thinking it would help the sale of his solder; I can't answer for McMurray and Burnham.

8th Inter. State whether or not it has been generally known in Baltimore that your firm used this patent iron?

Ans. I think it has been generally known among the trade.

9th Inter. To what extent among the trade has the Ewalt & Tillery patent been issued in Baltimore since the invention?

Ans. I think it was used among the large portion of the trade.

10th Inter. What, if anything, did Lang ever say to you about buying the Barker and Bostwick patents; and if he said anything, about what time was it?

Ans. Some three years since Mr. Lang wished me to join him in buying up some old capping and soldering patents that were laid aside, with the idea of getting a re-issue on them that we might collect a royalty from the other makers.

11th Inter. In which way did Lang think that the use of the Ewalt & Tillery iron would benefit the sale of his solder? (Objected to.)

Ans. At the time the iron was patented, Lang was making what was known as ring or wire solder. It was his idea that only that could be used with the Ewalt & Tillery iron, and that he would have the exclusive sale of the solder.

12th Inter. What notice, if any, prior to the institution of this suit, was ever given to your firm that the Ewalt & Tillery iron was an infringment upon any other patent?

102 Ans. I have no recollection of any having been given.

13th Int. What knowledge have you of any use for capping purposes that has ever been made of irons constructed under the Barker and Bostwick patents? (Objected to.)

None whatever.

Cross-examined by Mr. PRICE:

1st Cross-Interrogatory. You say that you have no knowledge of any use made of the Barker and Bostwick patents. I take it for granted that you know what the Barker and Bostwick patents describe and claim; if yea, please tell us, beginning with the Barker, what that patent was for, and what devices and combinations are claimed therein. (Objected to.)

Ans. I could not give you the combinations.

2d Cross-Inter. Do you know any device or combination claimed in the Barker Patent?

Ans. I can't say that I do.

3d Cross-Inter. Do you know any device or combination claimed in the Bostwick patent?

Ans. I do not know that I do.

4th Cross-Inter. Would you be able to tell, if I were to repeat the operation of soldering caps on tin cans, whether the workmen at your establishment soldered their cans in the manner I would describe; or in other words, have you such practical knowledge of the operation of soldering as to know how it is done?

Ans. I should and have.

5th Cross-Inter. You say you use the Ewalt and Tillery iron in your establishment; is it used in the following manner or not: First, place the cover carefully on the can and put solder around the lid, then put the rod of the Ewalt & Tillery iron on the cover to hold it; then put the heated iron or soldering disc or tool down in contact with the solder until it is melted, then turn it back and

forth until the solder is spread evenly around the lid, then
103 withdraw the disc or soldering tool or iron, with the rod still pressed upon the lid until the solder sets or hardens, and the operation is completed; is this a correct description of the mode in which can caps are soldered in their places by the process used in your establishment?

Ans. It is.

6th Cross-Inter. Is that the way in which can caps are soldered in their places in other establishments to your knowledge?

Ans. I think it is.

7th Cross-Inter. Are you aware that that is the precise mode described in both the original and re-issue of the Barker patent for soldering caps on cans?

Ans. I am not.

8th Cross-Inter. If you were informed that such were the fact, would you still say that you had no knowledge of any use for capping purposes, that has ever been made of irons constructed under the Barker and Bostwick patents as testified in answer to the 13th interrogatory-in-chief?

(Objected to generally, and also because though the patent may claim this mode of operation, the patent itself, and the machine may be of such a construction, as not to perform the function claimed for it.)

Ans. I would say the same thing, that is, I would testify that I did not know of the use of these patent irons.

9th Cross-Inter. Do you know of the use in your establishment or others, of a soldering iron or machine having a rod adapted to hold the can cap or lid in place, in combination with a soldering iron, mounted upon and arranged to be rotated about said rod?

Ans. We have none in use, and I do not know of any who has.

10th Cross-Inter. Look at the Ewalt & Tillery model now shown you, and say whether the Ewalt & Tillery model has a rod
104 adapted to hold a can cap or lid in place, in combination with a soldering iron mounted upon and arranged to be rotated about said rod?

Ans. It has.

11th Cross-Inter. Has that Ewalt & Tillery model a rod adapted to hold a can cap or lid in place, in combination with a soldering iron, sliding upon said rod, and adapted to be rotated about it?

Ans. It has.

12th Cross-Inter. Is that apparatus represented by the Ewalt & Tillery model, a soldering tool conforming in shape to the cap to be soldered, in combination with an independently movable rod, upon which said tool is mounted?

Ans. It is.

13th Cross-Inter. You say that you are the owner of a two-thirds interest in the Ewalt & Tillery patent, have you any assignment of said interest?

Ans. I have not.

14th Cross-Inter. How long have you owned an interest in this patent?

Ans. I have owned a third interest ever since the patent was issued; four years ago, this spring, I came into possession of the other third.

15th Cross-Inter. From whom did you obtain the two-thirds interest, and how did you obtain it?

Ans. I obtained a third interest in it by paying for the expense of issuing the patents. The other third I bought from John A. Tillery.

16th Cross-Inter. What were the expenses that you paid for the issuing of the patents, for which you received a one-third interest? (Objected to.)

Ans. Several hundred dollars; I could not say how much. There were other expenses besides the papers. They were experimenting some time at my expense.

17th Cross-Inter. What did you pay for the other third you have since obtained from Tillery?

Ans. He owed us between 17 to 18 hundred dollars. I gave him that bill and $150 in cash.

105 18th Cross-Inter. And when you did this did he make you an assignment of that third?

Ans. He gave me a receipt for his entire interest in the iron; I did not get an assignment for the first third I acquired in the iron.

19th Cross-Inter. Since you have been the owner, or claim to be the owner, of two-thirds of the Ewalt & Tillery patent, how have you prosecuted your rights under these patents, whether by sales of the irons or otherwise?

Ans. I have never attempted to make any sales; Mr. Ewalt has always attended to that part of the business.

20th Cross-Inter. What sales of that iron have been made to your knowledge?

Ans. Sales to the trade generally; I cannot cite names particularly; I only know it as reported by Mr. Ewalt.

21st Cross-Inter. What amount of sales has been reported to you?

Ans. I could not say, I never have kept an account of them.

22d Cross-Inter. Approximate them?

Ans. I don't know that I can give any account of them, it was a private speculation on my part and I put the money in my pocket when I got it; I should say that there were at least twenty-five sales to different persons, if not more; I do not know the average number sold to each person; Mr. Day says that he purchased fifteen pair at one time.

23d Cross-Inter. How many pairs have you used since the date of the patent, in your own establishment?

Ans. I may have used twenty-five pair.

24th Cross-Inter. Did you pay any royalty to anybody for the use of them?

Ans. No, the understanding was that we were to use as many irons as we pleased without paying any royalty; Mr. Tillery was in our employ at the time the patent was issued and helped to get the patent up.

25th Cross-Inter. When these irons were sold, what proportion of the money did you receive arising from their sale?

106 Ans. One-third up to the time of purchasing Tillery's interest, and after that two-thirds.

26th Cross-Inter. Can you tell how much you have received altogether?

Ans. I cannot. I cannot approximate, as they were sold at different prices.

27th Cross-Inter. What were the prices at which these irons were sold?

Ans. One hundred and fifty to fifty dollars a pair.

28th Cross-Inter. What did they cost to make?

Ans. I don't remember; ten dollars would cover it, I should think.

29th Cross-Inter. Don't you think five would cover it?

Ans. It might now; it would not at the time they were first manufactured.

30th Cross-Inter. During the past year or two years, did not you, Ewalt and Tillery, form the design of combining your interests and bringing suits against parties whom you suppose were infringing the Ewalt & Tillery iron? (Objected to.)

Ans. Tillery has had no interest in the iron for the last two years.

31st Cross-Inter. How about yourself and Ewalt? (Objected to.)

Ans. Ewalt and I have brought suits against no one.

32d Cross-Inter. I did not ask you whether you had brought suits against any one, but whether you and Ewalt had consulted together with the design of bringing suits against persons whom you thought were using the Ewalt & Tillery iron, or infringements of that iron, and whether or not you had concluded to carry that design into execution?

Ans. We have talked about bringing suit against parties that were infringing the iron, but we have never fully decided to do so.

33d Cross-Inter. Had you not gone so far as to instruct Ewalt to go ahead, ascertain the infringers, and to employ counsel for the purpose of prosecuting those suits?

107 Ans. I may have asked him to get the cost of prosecuting the suits.

34th Cross-Inter. Were not Louis McMurray & Co. one of the parties who you designed to sue?

Ans. No, sir; it was never mentioned about suing McMurray only by Lang when he wanted me to buy up these old patents.

35th Cross-Inter. Were you not stopped from the prosecution of

these suits by this suit, which was brought against you for the infringement of the Barker and Bostwick patents?

Ans. No, sir; we had never commenced any suits.

36th Cross-Inter. Were you not deterred from bringing suits by this suit which was brought against your firm?

Ans. No, sir.

37th Cross-Inter. Have you not since this suit was brought made an effort to settle it by conveying your right in the Ewalt & Tillery iron to the complainants, and have you not repeatedly alleged, as a reason, that by putting the Ewalt & Tillery iron in conjunction with the irons of the complainants, you might all join together and prosecute the entire trade for an infringement? (Objected to.)

Ans. I had some talk with Mr. Lang about a compromise when he was in Baltimore some time since, but I never suggested or talked to any one about joining with them in prosecuting the entire trade.

38th Cross-Inter. What was the basis of the compromise which you did suggest to Mr. Lang with regard to the rights that you would hold over others? (Objected to.)

Ans. I never made any proposition to Mr. Lang as to the rights I would hold over others.

39th Cross-Inter. Did you authorize any other person to make such proposition?

Ans. I never have.

40th Cross-Inter. Did you send Mr. Tillery to Mr. McMurray, and if yea, what did you authorize him to do?

Ans. I did not.

108 41st Cross-Inter. Did you suggest to Mr. Tillery to call upon Mr. McMurray upon the subject?

Ans. I have no recollection.

42d Cross-Inter. Do you know whether Mr. Tillery did call upon Mr. McMurray?

Ans. I do not.

43d Cross-Inter. Did Mr. Tillery ever tell you that he had done so?

Ans. I don't know that he did.

44th Cross-Inter. Did you never authorize Ewalt to see the complainants, or either of them, upon the subject?

Ans. I could not say that I did; I may have talked with him in relation to seeing them, but I have ro recollection of it.

45th Cross-Inter. Can you recollect the basis of what you wished him to say to them?

Ans. Nothing in particular.

46th Cross-Inter. Was it anything in relation to the Ewalt & Tillery patent, or the joining of said patent with complainants' patents?

Ans. Never in relation to joining the patents. I may have told him that I would sell them my interest in the Ewalt & Tillery iron, reserving the right to use for our own factory.

47th Cross-Inter. What was the result of your interview with Mr. Lang when you approached him the last time he was here?

Ans. It did not result in anything; there was no bargain made.

48th Cross-Inter. What proposition did you make? (Objected to.)

Ans. Nothing more than to sell my interest to them.

Re-Direct:

1st Re-direct Interrogatory. When did you see Lang?

Answer. I met him on Second street, in Mr. Cathcart's office, accidentally.

109 2d Re-direct Inter. Have you or not sought interviews with Mr. Lang or with any of the complainants in this case for the purpose of making a settlement?

Ans. I have not.

3d Re-direct Inter. In what way have any conversations you and Lang and Ewalt and Tillery may have had, come about?

Ans. Ewalt and Tillery came to my office; I had no conversation with Lang, only as above stated.

4th. Re-direct Inter. When Ewalt came to your office, did you or not know from his conversation, or from any other facts, that he was in the employ of Mr. McMurray?

Ans. Only by hearsay; I did not.

5th Re-direct Inter. What do you mean by hearsay, and did you hear that he was in Mr. McMurray's employ before or after he came to your office?

Ans. I have heard since he came to my office that he was in Mr. McMurray's employ; by hearsay I mean talking by the workmen in the shop since he was there.

6th Re-direct Inter. In your direct examination you stated that you never knew of irons made from the Barker and Bostwick patents being used, and in cross-examination you stated, that you did not know what was claimed by these two last patents, please state what you mean by these last two apparently conflicting answers? (Objected to as not stating what the witness said.)

Ans. I do not understand what you mean by conflicting answers.

7th Re-direct Inter. How do you explain your answer-in-chief, that you never knew of such irons being used, if you have no knowledge as to what kind of irons are made from the Barker and Bostwick patents. (Objected to on same ground.)

Ans. I can't answer unless I am allowed to explain; there are so many of these irons that I am not familiar enough with them to know one from another, unless I see them.

110 8th Redirect Inter. Have you or not seen the drawings of the Barker & Bostwick Patents, now shown to you?

(Complainant's counsel objects to the question, and also to showing the witness drawings of any patents, as the witness, so far from being an expert, has already testified that he knows so little even about the irons that he could not tell one iron from the other unless he saw them.)

Ans. I have.

9th Re-direct Inter. State whether or not you have seen in use any irons made like these drawings?

Ans. I never have.

10th Re-direct Inter. You have stated that you are not well enough acquainted with the different irons to distinguish one from the other without seeing them; what do you mean by this answer? (Objected to, as the meaning is very plain.)

Ans. I mean that I am not well enough acquainted with them to make a drawing of them unless I was looking at the iron.

Re-cross examination by Mr. PRICE:

1st Re-cross Interrogatory. You have stated that you met Mr. Lang accidentally. Had you not, previous to you meeting him, written him letters asking him for an appointment to meet you; and if yea, how many since the beginning of this suit?

Answer. I received a telegram from Mr. Lang last summer, requesting me to meet him in New York, but I did not meet him there. I think I answered him that I would like to meet him when he came to Baltimore. I may have written another letter since then, but I am not sure. I was in Fair Haven, Conn., when I received this telegram.

2d Re-cross Inter. Was not this telegram which you received from Lang, in answer to a communication from you, asking him to make an appointment?

111 I have no recollection of having any communication with him about an appointment.

3d Re-Cross-Inter. Have you the telegram which you received from him?

A. I don't think that I have.

4th Re-Cross-Inter. Did not the telegram state that he would be in New York but a single day on his way home, and if you desired to see him that you could see him then?

A. I don't remember the exact wording of the dispatch. I only remember it was in relation to meeting him in New York.

5th Re-Cross-Inter. What was the date of it?

Ans. I think it was the last of September or first of October, as well as I remember.

6th Re-Cross-Inter. Had you any knowledge that this suit was brought at that time?

Ans. I think I had.

7th Re-Cross-inter. Have you not since that time, and prior to the date of your meeting him in Second street, communicated with him, requesting an interview, either by letter or otherwise?

Ans. I think I may have written him to come and see me when in the city.

8th Re-Cross-Inter. When was it that Ewalt came to your office, at the time you say that you did not know he was in McMurray's employ?

Ans. At the time I had a conversation with Mr. Lang.

9th Re-Cross-Inter. When did you first hear that he was in the employ of Mr. McMurray?

Ans. About a month since.

10th Re-Cross-Inter. Have you known it ever since he was examined as a witness in this case?

Ans. No; I did not know that he testified that he was.

11th Re-Cross-Inter. Have you not, since Ewalt gave his testimony in this cause, sought interviews with him, and written him a letter or letters asking an appointment with you?

112 Ans. I may have done so; I have had conversations with him since that time.

D. D. MALLORY.

Subscribed and sworn to before me, this 19th day of February, 1880.

ISAAC BROOKS, JR., *Examiner.*

George W. Day.

GEORGE W. DAY, a witness produced on behalf of the defendants, after being duly sworn, deposes and says, as follows:

1st Interrogatory. Please state your name, age, residence, and occupation?

Answer. My name is George W. Day; I am of legal age; I reside in Baltimore; I am a fruit and oyster packer, and I am a member of the firm of Evans, Day & Co.; I am president of the Union Oyster Company of Baltimore city.

2d Inter. How long have you been in the oyster packing business in Baltimore city?

Ans. For over ten years; I have been actively engaged here for about six years; previous to that, for five years, I was a special partner.

3d Inter. What soldering iron has been used by your firm in your business during the past seven or eight years?

Ans. I think we commenced to use the Ewalt & Tillery iron in 1872 or '3, and we have continued using it, or an iron similar to it, up to the present time.

4th Inter. Do you know the complainants in this case, and if so, how long have you known them respectively?

Ans. I have known Mr. McMurray for over twenty-six
113 years; Mr. Burnham I have known fully the same time; Mr. Lang I became acquainted with about 1872, when he commenced selling solder.

5th Inter. What knowledge, if any, within the past seven or eight years, had these complainants, or either of them, of the use by your firm of the Ewalt & Tillery patent?

Ans. As regards Mr. McMurray, I don't know that he had any knowledge, as I did not have any conversation with him about it. As regards Land and Burnham, they have both been in our estab-

lishment repeatedly, and saw them in use. Mr. Lang was in our establishment before we used the iron, and was desirous that we should use it, so that we could buy his wire solder. Lang and Burnham saw us using the iron from the first.

6th Inter. You have spoken of using the Ewalt & Tillery iron, or one similar to it, of late; has this iron which is similar to the Ewalt & Tillery iron any particular patent name, or is it simply a modification of that patent?

Ans. I don't think it has any patent. I think it is called the Debow. We bought fifteen of the Ewalt & Tillery irons, and we bought the others in addition, and we used them all.

Cross-examined by Mr. PRICE:

1st Cross-Interrogatory. From whom did you purchase these fifteen Ewalt & Tillery irons?

Answer. They were bought I presume of Ewalt & Tillery.

2d Cross-Inter. From whom did you buy the Debow irons, and how many did you buy?

Ans. I presume they were bought from Debow himself, how many I could not say.

3d Cross-Inter. Did you buy sufficient of these irons of both kinds to run your business in Baltimore and Indiana?

Ans. I could not answer that question. I don't attend to the practical working of the iron. I attend to the office.

114 4th Cross-Inter. Do you use the Debow iron in Baltimore and in Indiana also?

Ans. That I could not say.

5th Cross-Inter. Do you know which of the irons the Ewalt & Tillery or the Debow is used in Baltimore or in Indiana; and if yea, state what you do know about it?

Ans. I don't know anything about it.

GEO. W. DAY.

Subscribed and sworn to before me, this 19th day of February, 1880.

ISAAC BROOKS, JR.,
Examiner.

Herman S. Platt.

HERMAN S. PLATT, a witness produced on behalf of the defendants, after being duly sworn, deposes and says, as follows:

1st Interrogatory. State your name, age, residence, and occupation?

Answer. My name is Herman S. Platt. I am forty-one years of age. I reside in Baltimore county. I am an oyster and fruit packer. I have been in that business for twenty years.

2d Inter. What patent iron is used for soldering can caps by your firm, and how long has it been used?

Ans. The Ewalt & Tillery patent. We have used it since 1872.

3d. Inter. Are you acquainted with the complainants in this cause?

Ans. I am. I have known Mr. McMurray for over ten years. Mr. Lang ten years. Mr. Burnham about five years.

115 4th Inter. What knowledge, if any, have these complainants of your use of the patent iron, and how long have they had that knowledge? (Objected to.)

Ans. In the fall of 1872, Mr. Lang came into the office of Platt & Co. and stated, that in order to work his solder more effectually, there was a patent soldering iron called the Ewalt & Tillery, which he desired us to try; we said to Mr. Lang that we would try it; Mr. Tillery a day or two afterwards came over and brought a pair of the irons; we used them until the next day, when Mr. Tillery came over again to see if they suited us; we purchased one pair of them, paid him one hundred and fifty dollars for them; Mr. Lang was in the office at the time Mr. Tillery received his money for those irons; Mr. Lang knew that we were working them, and that we have been working them ever since; after we had used the Ewalt & Tillery iron for a year or more, Mr. McMurray's agent desired us to use his patent irom; the agent brought his iron to the factory, and used it for about a half a day with our men, trying to teach them to use it; we could not make a success of it; I suppose the agent knew that we were using the Ewalt & Tillery iron, because it was used in the house while he was there; I don't know that Mr. Burnham was ever in our factory; he was in our office.

5th Inter. To what extent is the Ewalt & Tillery patent used by the trade in Baltimore city?

Ans. I have no knowledge, but I understand that it is used pretty generally.

Cross-examined by Mr. PRICE:

1st Cross-Interrogatory. What was the matter with your men that they could not use the McMurray iron without instruction?

Answer. I don't know that there was anything the matter with the men.

116 2d Cross-Inter. Are you aware that millions of cans have been capped with the McMurray iron, and hundreds of thousands capped every year with that iron by men and boys who had no instruction whatever in its use?

Ans. I was not aware of that.

3d Cross-Inter. What kind of a soldering tool did you use prior to the time that you purchased a pair of Ewalt & Tillery irons?

Ans. The common soldering iron made of copper.

4th Cross-Inter. Have you used any other kinds of irons since you began using the Ewalt & Tillery iron?

Ans. Yes, sir; we had a pair of Mr. Lang's steel irons.

5th Cross-Inter. How long did you use these steel irons?

Ans. About two days; They are similar to the McMurray iron.

6th Cross-Inter. When you speak of the common soldering iron

which you used prior to the Ewalt & Tillery iron, do you mean an iron like the one I now hand you, and which is herein filed, marked Complainants' Exhibit—" Platt? "

Ans. I do.

7th Cross-Inter. Was that the iron in general use as far as you know, before that day?

Ans. It was.

8th Cross-Inter. In what way would your firm be affected should the result of this suit be in favor of the complainants? (Objected to.)

Ans. I don't know.

9th Cross-Inter. Have you ever been informed that the result of this suit in favor of complainants would affect your firm in the use of the soldering tool of Ewalt & Tillery, and if yea, by whom were you so informed? (Objected to,)

Ans. We had a notice last fall from Mr. Lang, I suppose, that we were infringing on him by the use of this iron; It was a printed circular, but I do not know who signed it.

10th Cross-Inter. Have you been requested to contribute towards the expenses of defending this suit; if yea, by whom? (Objected to.)

117 Ans. I have by an agent of D. D. Mallory.

11th Cross-Inter. Upon what grounds did he make the request that you should so contribute?

Ans. That it interested us as well as him.

12th Cross-Inter. Have you consented to contribute towards the expenses?

Ans. Yes.

13th Cross-Inter. What else besides yourself?

Ans. Evans, Day & Co., and Thomas Kensett & Co.

14th Cross-Inter. Is Mr. Day, who has just justified before the examiner, one of the firm of Evans, Day & Co., who have contributed towards the expense of this suit?

Ans. Mr. Day, who was testifying when I came in, is a member of the firm of Evans, Day & Co.

HERMAN S. PLATT.

Subscribed and sworn to before me this 19th day of February, 1880.

ISAAC BROOKS, JR.,
Examiner.

Then adjourned to February 20th, 1880.

February 20th, 1880—Commission met, all counsel present.

James H. Burris.

JAMES H. BURRIS, a witness produced on behalf of the defendants, after being duly sworn, deposes and says, as follows:

1st Interrogatory. State you name, age, residence, and occupation?

Answer. My name is James H. Burris. I am fifty-one. I live 194 S. Washington st. I am a tin sheet iron worker.

118 2d. Int. What, if anything, do you know about capping oyster and fruit cans?

Ans. I know all about capping them.

3d. Inter. When were you, either as employee or on your own account, engaged in capping cans?

Ans. In 1863 and 1864, at Mr. Seth's, on Albemarle st., near Plowman st., No. 9, I think.

4th Inter. What kind of an iron or machine was used there for capping?

Ans. We call it the straight common iron.

5th. Inter. What do you know about soldering irons, other than the common straight iron, if anything, in use prior to 1870?

Complainants agree that this witness shall be as fully examined as to the use of soldering and capping irons prior to 1870, as if respondents had, under the acts of Congress on the subject of patents, given notice in their answer that they would so examine him; and it is likewise agreed, that other witnesses as to Exhibit Burris, may be so examined without notice, without counsel for complainants waiving any other objections on other grounds, as to the use of the same iron, that the above witness may testify to.

Ans. I got an iron up myself in 1863 or 1864; I capped cans with it at No. 8 S. Front st., in my own establishment; I used it off and on for two seasons, capping up mostly tomatoes and peaches—only a few for a hotel, and that was all.

6th Inter. Please describe the iron that you got up and used?

Ans. The first commencement of it was, I took a carpenter's brace; where the bit goes in I put a piece of iron, then I took a soldering iron—a common straight soldering iron—and lashed it on with two pieces of wire, one on the top and one on the bottom; when I went to cap with it I found I could not turn my hand all round; I then laid that aside; took some gas pipe and made
119 one on the style of a brace, and I used the straight iron, where the bit goes in on a carpenter's brace, and where I had the capping iron, I put an iron rod, a small piece of rod, and I capped with it.

7th Inter. Explain now the mode of capping a can with this iron?

Ans. With the old hand iron we worked around this way; (the witness makes three motions with his hand, as if capping a can; the witness takes a piece of solder, and holds it near the edge of the crease of the cap, and then takes the soldering iron, melts the solder, and makes three wipes around the can, and the operation is complete.) With my iron the iron rod goes in the centre of the cap, and the copper soldering iron goes around in the crease.

8th Inter. In what way is the soldering iron by your machine made to go round the crease?

Ans. It goes round in a swivel.

9th Inter. What is the position of the operator's hands while capping a can with your machine?

Ans. Just the same as boring a hole; the left hand is on top of the machine pressing down, and the right hand holds on to the machine and goes round with it.

10th Inter. What service did the rod perform which rested on the centre of the cap?

Ans. It acted as a pivot, as a pin for the machine to work on.

11th Inter. What held the cap down during the process of soldering?

Ans. The hand on top of the machine.

12th Inter. Look at the iron now shown you, marked Defendants' Exhibit Burris, and state what you know, if anything, about an iron of the same structure with it? (Objected to.)

Ans. The one I made was out of gas pipe of the same principle as this, except my soldering iron was straight instead of curved; we had no soldering irons that were curved in those days; mine were straight.

13th Inter. What curve do you speak of in your answer?

120 Ans. The witness points to the curve at the end of the copper soldering iron attached to Exhibit Burris.

14th Inter. Where was the gas pipe used in your machine with reference to this machine?

Ans. The whole of it from the top down to the set screw was gas pipe, except the rod which rests on the top of the cap, and except also the soldering iron, which was made of copper.

15th Inter. If I understand you correctly, the bent iron in Exhibit Burris, instead of being solid, was a piece of gas pipe bent as this is bent?

Ans. Yes, mine was put together by elbows, the gas pipe was not bent. If I had seen this iron then, (Exhibit Burris,) it would have saved me a heap of trouble.

16th Inter. How would it have saved you trouble?

Ans. I would have taken a straight piece of pipe and have bent it, in place of going to all the trouble I did.

17th Inter. In doing what?

Ans. In putting mine together with elbows and T's.

18th Inter. How was your iron heated?

Ans. By charcoal fire.

19th Inter. State whether or not this machine was used publicly in your establishment? (Objected to.)

Ans. I allowed no one to see it except the two hostlers, two colored men, and Mr. Walmann.

20th Inter. What precautions, if any, did you use to prevent persons from knowing about the use of this machine, after you got it up, and before 1870?

Ans. None at all. The cans that were capped with my irom similar to this were brought over to me and were taken back.

21st Inter. How many persons, to the best of your knowledge, up to 1870, knew that you used that iron?

Ans. I don't know.

22d Inter. Did you or not endeavor to keep people from seeing it? (Objected to.)

Ans. I did at first.

121 23d Inter. After you got it up and commenced to use it, state whether or not you endeavored to conceal its use from the public? (Objected to.)

Ans. I did at first.

24th Inter. My inquiry is, after it had been in use some time? (Objected to.)

Ans. At first I did not let any person see it; after that I did not care who saw it, as I did not think it would ever be of any account.

25th Inter. In your answer to the 19th interrogatory you say, "I allowed no one to see it except the two hostlers—two colored men—and Mr. Walmann," to what point of time with respect to getting the iron up does this answer refer? (Objected to.)

Ans. When I was capping the cans in my place in 1863 or '4.

26th Inter. When did you first begin to allow any persons to see the machine?

Ans. In 1864, I think—it was in 1863 or '4, I can't say which—it was when Mr. Seth carried on in Albemarle street.

27th Inter. To the best of your knowledge, considering the number of people who came into your establishment, how many persons did see that machine up to 1870? (Objected to.)

Ans. I don't know. After I got done with it I found that it would not work as I wanted it; all hands in the shop might have seen it, if they had wanted.

28th Inter. Why would it not work satisfactorily?

Ans. I had so much trouble with the copper when heating it; I had to take it out all the time.

29th Inter. What other trouble, if any, had you with it?

Ans. The cap would blow—that is, raise.

30th Inter. Then in your opinion it did not satisfactorily perform the work for which it was made?

Ans. I know it did not.

31st Inter. What do you mean by blowing?

Ans. The air coming out of the can, raises the cap.

122 32d Inter. What, if anything, happens to fruits or oysters in the can, if the can blows?

Ans. If the caps leak they spoil.

33d Inter. What, then, is the leading object to be accomplished by the soldering process?

Ans. For the can to be tight, of course.

34th Inter. Look at Exhibit Ewalt & Tillery Model, now shown you, and state whether or not, in your judgment as a practical can-capper, that can be used to make a can tight? (Objected to.)

Ans. It can.

35th Inter. Point out why that machine can be satisfactorily used while yours could not? (Objected to.)

Ans. In the first place, this rod pulls out, you can shove the iron in the fire and get it hot. In capping the cans this rod has a vent, which lets the air out of the can.

36th Inter. What is the result if the capping machine has no vent to let the air out of the can? (Objected to.)

Ans. The cap will blow or raise.

37th Inter. What is done with the rod in the Ewalt & Tillery model while the iron is being heated?

Ans. Nothing. You pull it out to keep it from getting red hot. If I leave it there it will get red hot.

38th Inter. Explain where the rod is while the iron is being heated; by that model?

Ans. Some cappers pull it all the way out, and some half way out.

39th Inter. What would be the result if that rod should be heated as well as the soldering iron?

Ans. You could not cap with it.

40th Inter. Why not?

Ans. It would make the cap blow.

41st Inter. Look at Complainants' Exhibit, "Barker Original Patent," at Fig. 2, and state whether or not the iron rod passing through the disc will be heated, while the disc or soldering iron is being heated?

123 (Complainant's counsel objects to showing this witness any patents or drawings of any kinds or descriptions, and asking his opinion thereon.)

Ans. Yes.

42d Inter. Supposing a soldering iron be circular, and a stationary rod be attached to its centre with which to revolve it around a cap, and a movable rod passes alongside of the stationary rod through the disc on to the cap, what effect would be produced by that movable rod on the cap while the soldering iron is revolved around the cap? (Objected to.)

Ans. It would not run true.

43d Inter. State whether or not this movable rod, as it performed a circle around the cap, resting on the cap, would tend to move the cap in the process of soldering? (Objected to.)

Ans. Yes, it would not run true.

44th Inter. Suppose the movable rod goes through the centre of the disc, and that the stationary rod attached to the disc is on the side from the centre, and that the centre rod is attached to the stationary rod near its top by a brace; state whether or not such a machine could be used to cap a can tightly, and, if not, why not? (Objected to.)

Ans. No, sir, because it is flat on the bottom. (Complainants' counsel objects to the answer.)

45th Inter. State whether or not such a machine, while being revolved around, could be made to press evenly on the sides of the cap? (Objected to.)

Ans. It would turn the cap; it would not solder it.

46th Inter. I don't think you understand the question, and the examiner will please read the question to the witness.

Ans. Of course if the rod which is in the centre is in the centre, it will run true in any machine.

47th Inter. Look at model McMurray, No. 3; we will suppose that the stationary rod of this iron is a solid movable rod, and is the centre rod of that iron. I take the actual centre rod of that iron
124 and suppose it to be attached to the top of that iron disc outside of the centre rod, and that the centre rod is fastened to this stationary rod by a clamp pin at the top. Now the question is, whether a machine so constructed would press evenly on the edges of the cap during the process of soldering?

(The witness asks counsel for defendants whether the clamp on top is stationary or movable; counsel replies that the clamp is a part of, and stationary to the center rod, but that the stationary rod fits loosely into the clamp.)

Ans. If the rod is on the outside, and comes through, it can press evenly on the cap, because the whole of it, and the iron, presses evenly on the cap.

48th Inter. Suppose we take an iron without any center rod at all, of the form of McMurray No. 3, except that the stationary handle, instead of being in the center, is at the side, would or would not the iron press evenly on the edges of the cap during the process of soldering?

Ans. You can press evenly with it, but it would twist your wrist to make it run true.

49th. Inter. How are the top of cans made at the present time for the putting up of fruits and oysters?

Ans. They are made with a crease.

50th Inter. Look at Fig. 1, in complainant's Exhibit Barker Original Patent, and state whether or not a soldering iron constructed at its bottom in that manner, can be used to solder a can with this crease; if not, why not?

(Complainant's counsel objects to showing the witness any drawings or patents of any description.)

Ans. It could not; it might in one way, but I would not guarantee that it would hold; I was going to ask if it fits the crease.

51st Inter. Give your own judgment from an examination, if it fits the crease or not? (Objected to.)

125 Ans. I don't understand you—(the witness asks, is that Fig. 1, the bottom of it, circular or square? and counsel for defendants say that it is circular)—the witness then proceeds to answer as follows: From the drawing it looks like it fits the crease.

52d Inter. From that drawing, Fig. 1, is the bottom of the circular soldering iron flat or bevelled? (Objected to by complainants' counsel that counsel for defendants should show drawing and point out features of the drawing to witness.)

Ans. It looks like it is flat there; that is what I asked.

53d Inter. When you stated that it would fit into a crease, was your opinion based upon the assumption that it was flat or bevelled?

Ans. If it fit in the crease of course it must be bevelled.

54th Inter. If, as a matter of fact, the circular bottom of a soldering iron is flat, can it or not be used to cap a can so that it will not blow?

Ans. If it is bevelled you can cap a can so that it will not blow, and if it is not bevelled you cannot.

55th Inter. Suppose a capping iron is shaped like McMurray No. 2, but that it is hollowed out to the edge, so that the centre rod is as large as the top of the cap, and the centre rod which is solid, and has no vent hole, covers the entire top of the cap except as to the edges which go into the crease, state whether or not such an iron can be used to solder a can so that it will not blow; and if not, why not?

Ans. It will blow.

56th Inter. How long would such a soldering iron with thin edges as I have described hold the heat?

Ans. Long enough to cap a dozen or two of cans.

57th Inter. State whether or not a hollow thin cylinder will hold heat as long as a hollow thick cylinder, if you know?

Ans. A thick cylinder would hold heat longer.

58th Inter. What would be the effect on the thick solid centre iron that I have described, while a heated hollow iron is being revolved around it?

126 Ans. It would heat it, and tend to make the can blow.

Cross-examined by Mr. PRICE:

1st Cross-Interrogatory. You have, as I understand you, made soldering tools, have you not?

Answer. I have.

2d Cross-Inter. Take the can in your hand to which you have just testified, and suppose that can to be the one ordinarily used in packing establishments, with the crease and cap of the shape there shown you, and suppose I were to ask you to make an iron for the purpose of soldering that cap on that can, and were to give you the following instructions: Make the disk or casting of sufficient thickness to retain the heat, and of suitable size to cover the lid of the can, with a recess in the under side of the disk to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover, would you make a tool from that description with a beveled edge, so as to fit it in the crease, or not? (Objected to.)

Ans. I would.

3d Cross-Inter. I desire you now to look at McMurray's model No. 3, upon which you have been testifying on behalf of the defendants, and look at the little wire which I have arranged upon the side of the rod; a small hole is now pierced through the disk, so that little rod may go through and rest upon the top of the cap of the can, would there be any danger of disturbing or moving that cap were I to rotate that tool backward and forward in the act of soldering? (Objected to.)

Ans. There would.

4th Cross-Inter. How much would the cap be disturbed by that rotation?

Ans. The least little bit would make the cap leak.

5th Cross-Inter. Suppose now, with that iron loose, so that it may slide easily up and down the rod, and I have finished rotating
127 that tool backward and forth, until the solder is spread evenly around the lid or cap of the can, I then placed my finger upon the little rod at the side, press it down upon the cap of the can, and lift the tool, keeping the rod still pressed upon the cap, until the solder sets or hardens, could I make a good job then?

Ans. Yes—being hollow the air would escape.

6th Cross-Inter. If the tool were solid, might not the air escape when it is lifted up?

Ans. It might, but it don't generally do it, because the least little air when the solder is setting and the solder will blow.

7th Cross-Inter. Suppose the hole in the disc through which the small wire passed were loose enough, what objection would you have to a solid tool then?

Ans. If the hole were large enough to admit the air I would have none.

8th Cross-Inter. As a mechanic, and you had made such a tool, and found the hole was not big enough to let the air escape, would you not make it bigger? (Objected to.)

Ans. Of course I would.

9th Cross-Inter. In answer to the 4th interrogatory-in-chief you have stated, that the kind of iron that was in use in 1863 or '4 was the common or straight iron. Please look at the iron now shown you, marked Complainants' Exhibit "Platt," and state if that is the kind of iron to which you refer?

Ans. Yes.

10th Cross-Inter. How long was that iron in common use for capping cans after 1863 and '4?

Ans. It is still in use to the present day.

11th Cross-Inter. That is the kind of iron which you described as being generally used in one hand, whilst a stick of solder was held in the other.

Ans. Yes.

12th Cross-Inter. In answer to the 10th interrogatory-in-chief, you stated that the rod in the iron which you made and about

128 which you testified, acted as a pin or pivot for the machine to work on; do I understand you that the pin or pivot revolved with the entire machine?

Ans. It revolved with the iron.

13th Cross-Inter. Was the iron that you used in that machine in shape such as Exhibit Platt?

Ans. It was.

14th Cross-Inter. You stated that you allowed no one to see this iron which you thus constructed, except two colored hostlers and Mr. Walmann. Why was it that you allowed no one else to see this iron? (Objected to.)

Ans. I thought some of the men might make an improvement on it.

15th Cross-Inter. It was susceptible of improvement, was it not?

Ans. Yes.

16th Cross-Inter. In answer to interrogatory in chief, No. 24, you have stated that at first you did not let any person see it, but after that you did not care who saw it, as you did not think it would ever be of any account. Do I understand you by that answer to mean that as long as you supposed you had a tool which would work satisfactorily, you wished to keep it as private as possible?

Ans. Yes.

17th Cross-Inter. And do I further understand you by that answer to mean that you threw it open to the public, and did not care who saw it, only, after you had determined that it would not work, and was of no account?

Ans. I threw it among my tools; it was only after I determined it was of no account that I did this.

18th Cross-Inter. Was it possible with that iron to lift the soldering tool from the cap, and leave the rod still pressed upon the cap?

Ans. No, sir; you had to lift it all together.

19th Cross-Inter. If one cap were a little higher or one crease a little deeper than another, would that apparatus be self-adjusting or would you have to adjust the tool by means of a set screw?

129 Ans. You would have to adjust the tool by means of a set screw.

20th Cross-Inter. When the tool was put in the fire to be heated, you had to take it out, did you not, by loosening the set screw?

Ans. I did.

21st Cross-Inter. When it was heated and you wanted to put it back, what did you handle it with?

Ans. A pair of pliers, or gas nippers.

22d Cross-Inter. Then you had to readjust it again?

Ans. Yes.

23d Cross-Inter. When you lifted that tool, what held the cap in its place and prevented it from blowing or raising?

Ans. There was nothing, and that was the reason I condemned it.

24th Cross-Inter. Did you abandon this tool altogether, because it was unfit for use for the reasons you have heretofore detailed?

Ans. I did, on account of the can blowing. If I had to go over them again to keep them from blowing, I might as well have used the old iron in the first instance.

25th Cross-Inter. Did you have to go over these cans with the old common iron after using that tool of yours?

Ans. Those that I was doubtful of, I had.

26th Cross-Inter. How long since you have seen that old iron which you constructed?

Ans. I see part of it now and then laying around the shop.

27th Cross-Inter. Where did Defendants' Exhibit Burris come from?

Ans. I don't know—I made a drawing at one time in Mr. Brown's office, and this machine must have been made from this drawing, or a similar drawing.

28th Cross-Inter. You have never seen that tool before to-day, have you?

Ans. No, sir.

130 29th Cross-Inter. You have stated that a leading object in capping the can was to have the can tight, and in testifying you have said that the result in a capping machine that has no vent to let the air out of a can, that the cap will blow or raise. Suppose there was a vent in any part of the top of the can, outside of the machine, would there be any necessity of a vent then in the machine itself to allow the air or steam to escape?

Ans. No.

30th Cross-Inter. Look at the rod now shown you—part of the tool of Exhibit McMurray No. 2—and state whether that would allow steam or air to escape sufficiently?

Ans. Yes, sir.

31st Cross-Inter. Suppose a rod in a capping machine were a large one, sufficient to cover almost the top of the cap, and a soldering tool were used like Exhibit McMurray No. 3, how long would that retain the heat, supposing it were made of copper?

Ans. I could cap eighteen cans with it.

32d Cross-Inter. You have stated that a large rod in a machine like that would become heated by the rotation of the tool about it; how many cans could you cap before the rod became so heated?

Ans. I don't know; I never tried it.

33d Cross-Inter. Do you suppose it would be heated the first time on the first can?

Ans. Yes, sir.

34th Cross-inter. How much would it be heated?

Ans. I could not tell that; it would be heated.

35th Cross-Inter. Suppose you had any number of solid rods and placed them on the cans in a row, very much as I place the weights on the cans now before you, and I call your attention at the same time to Exhibit McMurray No. 1, what would prevent me from soldering one can, lifting the tool over the rod, and putting it over another can, and over another rod?

Ans. If the rod is no higher than this little weight, nothing
131 would prevent you; the only objection I have if I was capping the cans would be the moving these little weights off; they would burn your fingers.

36th Cross-Inter. Would the revolution of the tool around such a rod upon each can heat the rod to such an extent as to do any material damage to the soldering of the cap?

Ans. No, sir.

37th Cross-Inter. Now suppose the rod were three or four inches high, and the tool or disc were made hollow or open, and the rod were high enough to project way above the tool, and the tool has a horizontal handle, what would prevent you doing the same thing with that tool?

Ans. You could do the same work, but not so good; the can would be apt to leak.

38th Cross-Inter. Why would it be apt to leak?

Ans. There would be no way for the air to escape.

39th Cross-Inter. How do you know there would be no way for the air to escape; I have not said there was not.

Ans. By its working in the crease, and the inside being solid, the air is bound to come out somewhere, and it would blow.

40th Cross-Inter. When the solder is melted and flows nicely around the crease, and I have lifted the tool and allowed the rod to remain, is not there plenty of room in the whole atmosphere to let the air escape, whilst the rod holds the cap in place until the solder is properly hardened?

Ans. No doubt of that, but as long as there is no vent the can is apt to blow.

41st Cross-Inter. Suppose the vent were outside the soldering tool, then what?

Ans. No doubt but that the machine would work.

42d Cross-Inter. Suppose the rod fit loosely in the tool, and the bottom of the rod were filed across with a three-cornered file from one side to another, or the bottom of the rod was roughed, so as not to make a tight joint upon the top of the cap, how would it work then? (Objected to.)

Ans. No doubt but that it would work.

132 43d Cross-Inter. You have practical experience as a can capper, have you not?

Ans. Yes.

44th Cross-Inter. Have you ever seen French canned goods?

Ans. I have seen cans called French canned goods.

45th Cross-Inter. Did you ever see any French canned goods with any vent in them at all?

Ans. No, not that I know of.

Re-direct examination:

1st Re-direct Interrogatory. Where is the vent hole in all cans that you have ever seen?

Answer. Mostly in the cap.

2d Re-direct Inter. Have you ever seen any that were not in the cap?

Ans. Only in caps for raw oyster cans.

3d Re-direct Inter. State whether or not, in using the Ewalt & Tillery iron, any pressure downward upon the soldering iron is required to perform the process properly?

Ans. Yes, sir.

4th Re-direct Inter. Without this pressure, is it or not possible to solder a can so that it will not blow?

Ans. With the Tillery iron there has to be pressure on it.

5th Re-direct Inter. If you take a circular soldering iron, and move it around, without using any pressure but its own weight, what would be the character of the soldering process performed by it?

Ans. The cap would blow unless there was something to hold it.

6th Re-direct Inter. Can any even pressure be used upon a circular iron which is worked by a horizontal handle, as seen in Fig. 1 in the Bostwick original patent?

(Counsel for complainants objects to showing witness the Bostwick original patent.)

133 Ans. Yes; the pressure on the handle, of course.

7th Re-direct Inter. The question is, whether it is possible for that pressure to be even, the handle being on the side?

Ans. Yes, sir; because the centre-rod keeps it straight; it works like a wheel on an axle.

8th Re-direct Inter. What do you suppose holds the circular iron in position, when worked by the side handle, in the way contemplated by your last answer?

Ans. The box or cylinder on the inside.

9th Re-direct Inter. Were there any creases in the cans on which you operated your machine in 1863 or 1864?

Ans. Yes.

JAMES H. BURRIS.

Subscribed and sworn to before me this 20th day of February, 1880.

ISAAC BROOKS, JR., *Examiner.*

Then adjourned to February 21st, 1880.

February 21st, 1880.—Commission met, all counsel present.

John T. Jones.

JOHN T. JONES, a witness produced on behalf of the defendants, after being duly sworn, deposes and says, as follows:

1st Interrogatory. State your name, age, residence, and occupation.

Answer. My name is John T. Jones; I am fifty years of age; I reside at 133 Hollins street; I am a machinist by trade; I am at

present in the machine business; I am a mould-maker, a die-maker, and general tool-maker—light tools.

2d Inter. What acquaintance, if any, have you with the structure of machines generally?

Ans. I have a very broad acquaintance with machinery.

134 3d Inter. What knowledge, if any, have you of tools used for soldering caps on metallic cans?

Ans. I can't say that I have a very extensive knowledge of that piece of business. The knowledge I have of this is what I have seen, and the different machines that I have seen used. I have seen the common plain soldering iron—the soldering iron with a piece of copper, making a segment of a circle, and then I have seen a cast iron soldering iron made to strike the cap all around at once, but I have never seen the latter used. The others I have seen used.

4th Inter. What acquaintance, if any, have you with drawings for tools and machinery?

Ans. I have quite an extensive knowledge of such things.

5th Inter. Look at Complainant's Exhibit "Bostwick Original Patent," and state whether or not you have made an examination of the drawings and specifications therein shown; and, if you have, please produce and file with the Examiner, if you have one, a model made and constructed upon these drawings and specifications? (Objected to.)

Ans. I have examined that Exhibit, and I herewith file Exhibit "J. T. Jones," being a model constructed upon these drawings and specifications.

6th Inter. State whether or not a machine or tool constructed like that model, can be used to solder a cap tightly on a can; and, if not, give your reasons therefor? (Objected to.)

Ans. I suppose you might with a good deal of trouble solder a cap on with this. In the first place, all the things for holding the cap on while soldering must be made so as to let the air out of the can, otherwise it will blow, and raise the cap, causing the fruit or oysters to spoil. Exhibit J. T. Jones has no vent at all. In the next place, you would have to place your solder all around the cap or nearly so, to get it to flow; then again this machine seems impracticable, from the fact that the centre piece would get hot, and in heating the centre piece would naturally cool the soldering iron off; then again this centre piece being hot, the workman manipulating it to cause the solder to flow all around the cap,

135 would naturally cause it to lose its equilibrium, on account of not having any way of holding the centre piece on the cap, which would naturally be too hot for him to hold with his hand.

7th Inter. State whether or not an even pressure could be obtained by a handle inserted in the side of the soldering iron, as shown in that model?

Ans. As a general thing it could not, without a pressure on the center piece.

8th Inter. You say as a general thing, it could not without the pressure; do you mean that sometimes an even pressure could be obtained, without holding the center rod in its place?

Ans. It could, by first letting the solder thoroughly melt under the iron, then turning it very carefully.

9th Inter. What effect would be produced, if instead of using a circular soldering iron, a small segment of a circle should be used in this machine?

Ans. You could not use this machine with a small segment of a circle, without thoroughly confining the cap in its place by the centre piece, by putting your hand on the top of it.

10th Inter. Is it or not possible to put the heated soldering iron over the top of that centre rod, without heating the centre rod more or less from top to bottom?

Ans. You could not use it on them without heating the center rod.

11th Inter. Suppose the centre rod were three or four feet high, what effect would there be produced on the top of the rod, simply by slipping the heated soldering iron over the top of it?

Ans. It would have a tendency to heat the rod more or less at the top?

12th Inter. Even if there be a practicable pressure upon this centre rod, could or could not a small segment of a circle be practically worked with this machine?

Ans. I don't think it could; it would take too long to do the work.

136 13th Inter. With respect to holding the heat, how would the hollow cylinder, in Exhibit J. T. Jones, compare with the soldering iron in the "Ewalt & Tillery Model" now shown you?

Ans. It would not compare very favorably.

14th Inter. Suppose, as a matter of fact, the Tillery iron would hold the heat long enough to cap twenty cans, about how long, proportionately, would this hollow cylinder hold the heat?

Ans. I would suppose that that would cap but three or four.

15th Inter. State whether or not the sides of this hollow cylinder are of the width of an ordinary crease?

Ans. It is as wide as some, but not as wide as some others.

16th Inter. Where is the vent hole in a can for the escape of air?

Ans. We place it as near the centre of the cap as possible.

17th Inter. Why is the vent hole put in the cap instead of some place else in the top of the can?

Ans. Because it is the last piece of metal that is put on the can.

18th Inter. If a vent hole were made on the top of the can, but not in the cap, then would there be any objection to the size of the centre rod at its bottom. I mean in Exhibit J. T. Jones?

Ans. I think there would. In the first place the bottom covering too much of the space of the cap, it would be in the way of the soldering iron.

19th Inter. How about its tendency to heat the cap and its effect of heating it?

Ans. It would have a tendency to heat the cap and deface it, and melt the tin on the cap. It don't take much to condemn a fruit can.

20th Inter. Look at complainants' exhibit, Barker Original Patent, and state whether or not the centre rod is shown to rest upon the centre of the cap? (Objected to.)

137 Ans. The centre rod does not rest upon the centre of the cap, as shown in these drawings.

21st Inter. Look now at Complainants' Exhibit Barker Re-issue No. 2, and state where the centre rod is shown to rest by the drawings therein.

Ans. It rests on one side of the centre, here by measurement, considerably so.

22d Inter. From the drawings in Complainants' Exhibit "Barker Original Patent," how is the centre rod attached to the stationary rod at the top?

Ans. By means of a loop-hole, in which it is intended to slip up and down.

23d Inter. Is that loop-hole, as you judge from the drawings, attached firmly to the movable rod or not?

Ans. It is.

24th Inter. If, as a mechanic, those drawings and those specifications were handed to you for the purpose of constructing a machine in accordance therewith, would you or not attach that loop-hole firmly to the movable rod?

Ans. I certainly would if you wanted me to make it like the drawings.

25th Inter. Please read the specifications and claim and state whether from the description therein, you would or not attach the loop firmly to the movable rod? (Objected to.)

Ans. I would.

26th Inter. If that loop is attached firmly to the movable rod at its top, then in taking hold of the handle of the rod attached to the soldering iron, and moving the soldering iron around in the crease, what movement, if any, would be made by that movable or centre rod?

Ans. It would describe a circle on the cap.

27th Inter. What effect, if any, would be produced on the steadiness of the cap by this circular movement of the movable rod?

Ans. It would have a tendency to throw it a little one-sided
138 while the pressure was on it, and the solder being melted, it would have a tendency to throw the cap a little one-sided.

28th Inter. Could a movable rod so constructed serve in any sense as a pivotal rod, around which the soldering iron would revolve?

Ans. Not in capping, because whatever it was out of the centre, it would throw the iron that much out of the centre.

29th Inter. Look at Fig. 2 in Barker Original, and state whether

or not the soldering iron can be heated, without at the same time heating the movable rod and the handle?

Ans. They all heat together on the same end the soldering iron is on.

30th Inter. When that soldering iron shall be heated, how could you hold the handle and the movable rod by the hand?

Ans. We could not hold it if it was hot, but if the handle was long enough, the handle would not get hot all the way up.

31st Inter. Suppose the soldering iron was of the height shown in Exhibit McMurray No. 1, and solid, except the concave opening at the bottom, deep enough not to press upon the cap, and having through its length an opening large enough to admit a movable rod of the size shown in the drawings and specifications in "Barker Original," when such an iron should be heated hot enough to cap with, having a handle and rod as shown in Fig. 2, how long would the handle and rod, as shown in Fig. 2, have to be in order that they be not heated at the top?

Ans. Supposing they use one of the common pots for heating these irons, the rod would have to be three feet long to keep from burning the man's hand. I am speaking of a rod without having wood to it.

32d Inter. Take a rule and measure the length of the handle in Exhibit McMurray No. 1?

Ans. It is just one foot from the top of the disc.

33d Inter. What effect, if any, would the movable rod, when heated at its bottom, have upon the cap?

139 Ans. It would have a tendency to melt the tin on the top of the cap.

34th Inter. What effect would that have on the fruits or oysters inside of the can?

Ans. I don't know that it would have any effect at all, unless it would close up the vent hole.

35th Inter. Suppose a soldering iron, circular in shape, be solid, with the exception of a small opening for the movable rod, so that the concave opening at the bottom is only deep enough to keep it from resting upon the top of the cap, what effect, if any, will that heated concave surface have upon the cap or can?

Ans. It would have a tendency to disfigure the tin on the cap, and turn it a kind of a blue color.

36th Inter. If you know, state whether or not the segment of a circle is more practicable for soldering than an entire circle; and if yea, why?

Ans. It is a pretty hard question for me to answer—the segment of a circle is used to economize solder, and to more thoroughly cause it to flow and hermetically seal the cans.

37th Inter. Have you or not had any experience with patents?

Ans. I have worked on various patent machines, but I could not enumerate them; I see a thousand of them in a year sometimes—that is nominally speaking.

38th Inter. If you were Commissioner of Patents, and knew that a patent for soldering irons had been granted, as shown in Barker original and Bostwick original, and a third person should ask a patent for a soldering device like the Ewalt & Tillery model now shown you, would you or not grant him a patent? (Objected to.)

Ans. I would on one part of it, that is the vent in the end of the rod in Ewalt & Tillery model.

39th Inter. Why would you not grant a patent on the other parts of the machine?

140 Ans. Because I think the copper soldering iron on the Ewalt & Tillery iron is old; I have seen hand soldering irons made of the same shape twelve years ago.

40th Inter. What about the rod? (Objected to.)

Ans. I would not be willing to give a patent on a rod, from the fact whenever I go to solder any small thing to another piece of metal, I always pick up something or other in the shape of a rod to hold it down in place while soldering it. (Objected to by complainants' counsel.)

Then adjourned to February 24th, 1880.

February 24th, 1880.—Commission met; all counsel present. The examination of the witness was then resumed.

41st Inter. What about a patent for the combination of the rod and iron in the Ewalt & Tillery model? (Objected to.)

Ans. I think I would give a patent for the combination of the rod and iron.

42d Inter. State what material differences, if any, there are between the Ewalt & Tillery iron and combination, and the Barker and Bostwick patents? (Objected to.)

Ans. The difference between the two irons is, in the first place, the Tillery iron is so constructed as to vent the can while being capped. The Tillery iron can be revolved to make a perfect circle, and also to give a flexible movement by the pressure of the hand on the handle, while soldering the cap. I believe that is all I can see.

43d Inter. How about the shape of the soldering iron in the Ewalt & Tillery model?

Ans. It is made the segment of a circle in order to distribute the solder more regularly, and also to economize the solder.

44th Inter. How about heating the soldering iron without heating the center rod? (Objected to.)

141 Ans. The soldering iron can be heated without heating the centre rod—as the centre rod can be removed.

45th Inter. In what position with respect to the cap are the handles of the centre rod and of the soldering iron held during the process of capping?

Ans. In an upright position.

46th Inter. You have now stated the material constituents of the Tillery iron and combination, please now point out which of these

elements, if any, contained in the Tillery iron and combination, are not contained in the Bostwick and Barker patents?

Ans. The Bostwick soldering iron has no means of letting out the air from the can while capping. The Tillery iron can be made to describe a circle in soldering a cap on a can, while the Bostwick patent (represented by Exhibit J. T. Jones) is certainly intended to oscillate. It cannot be made to describe a circle without a good deal of inconvenience to the operator.

47th Inter. How about obtaining the flexible pressure of the hands in operating the Bostwick?

Ans. I think it would necessarily have to have a long handle on the centre weight. (Witness holds his hand about twelve inches above the top of the centre weight, and says, the handle would have to be that long if made of wood, and about three feet if made of iron.) The flexible pressure of the hand is done by means of the centre rod, oscillating at the top of the Tillery iron, while in the Bostwick, if you undertake to get a flexible movement there, you then, in oscillating at the top of the centre rod, throw a portion of the circle of the iron entirely out of the crease of the can. I mean this by working the Bostwick with a horizontal handle.

48th Inter. State whether or not in the Tillery iron any flexible pressure on the soldering iron itself is obtained by means of the hand clasping the wooden handle attached to the iron proper?

142 Ans. That is not intended to move any way, only to describe a circle, and to be raised up and down upon the centre rod. The flexible movement is obtained by means of the centre rod.

49th Inter. You have seen and examined the drawings, specifications, and claim in the Barker patent; please now produce, if you have one before you, a model constructed after this patent. (Objected to.)

Ans. (Witness picks up a model and asks defendants' counsel if this is the Barker, to which the counsel for defendants replies that it is. Witness proceeds, and says, holding an iron in his hand. This is it, and I herewith file it, marked J. T. Jones No. 2.)

50th Inter. If you know this is made after that patent, please explain to the examiner the reason for asking counsel whether this was the Barker iron?

Ans. Because there are two drawings—one the Barker and the other the Bostwick. I have examined both drawings, and know that J. T. Jones No. 2 is contained in one of them.

51st Inter. State whether or not the material elements that you have described as existing in the Ewalt & Tillery patent are found in this? (Objected to.)

Ans. They are not.

52d Inter. State whether or not the Bostwick and Barker patents, or either of them, contain any new and useful device for soldering caps on cans, and whether they show any scientific structure. (Objected to.)

Ans. I think they show no new and useful device. I think they do not show any scientific structure.

Cross-examined by Mr. PRICE:

1st Cross-Interrogatory. You say in your answer to the fifth interrogatory-in-chief that you have examined Exhibit J. T. Jones, being a model constructed upon the specifications and drawings of the Bostwick original patent. (Counsel for complainants, without waiving his objection to this witness, cross-examined him as follows:) Who made that model?

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Answer. I do not know.

2d Cross-Inter. Of what material is it made?

Ans. Wrought iron.

3d Cross-Inter. When did you first see it, and where?

Ans. I believe it was last Friday; I saw it in Mr. Brown's office.

4th Cross-Inter. You say in answer to the sixth interrogatory-in-chief, that all the things for holding the cap while soldering must be made so as to let the air out, otherwise it will blow; what do you mean by letting the air out?

Ans. In soldering the can around the top it creates a certain amount of steam or hot air, which, if not let off through the vent, will cause the cap to raise, and the solder will not be tight.

5th Cross-Inter. Does this ever occur after the solder has become set or hardened, or only when in a liquid or melted state?

Ans. Only when in a melted state.

6th Cross-Inter. How much vent is required to let the steam off?

Ans. They generally pierce the cap with a hole about one thirty-second of an inch in diameter.

7th Cross-Inter. Then if the rod in the Bostick model represented by Exhibit J. T. Jones were fitted loosely in the soldering iron or disc, so that the entire amount of escape in the whole circumference of that rod, and between it and the iron, amounted to the size of the little hole in the cap, would that be sufficient to let the steam escape?

Ans. It would if the centre hole in the cap were not closed by the centre rod of the device.

8th Cross-Inter. Suppose the rod were roughed at the bottom, so that it would not fit tightly on the top of the can, would that be sufficient? (Objected to.)

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As a matter of course, if there were vent places cut in this centre rod clear across the disc, so as to let the air escape between the rod and the soldering iron proper.

9th Cross-Inter. Did I understand you to say that you had read the specifications and claims in the Bostwick Original Patent carefully?

Ans. I have examined it as far as it regarded the shape and claims of Exhibit J. T. Jones.

10th Cross-Inter. Did you observe in the Bostwick specifications, while speaking of the hollow soldering iron, that it is therein de-

scribed as " formed interiorly as to receive and embrace LOOSELY a guiding rod to be placed upon the cap to be soldered," or did this language escape your attention ?

Ans. I saw where the patent intended that the centre rod should be loose.

11th Cross-Inter. Then if you saw by the patent that it was intended to be loose, and if as you say it would allow the steam to escape if it were loose, how do you reconcile that with your statement that it has no vent at all ?

Ans. Because the drawings in the patent papers show no vent upon the bottom of the centre rod at all—that is, I could not see any in the drawings.

12th Cross-Inter. Show me if you please, on the drawings of that patent, where the bottom of the centre rod is shown at all ?

Ans. Witness points to where the rod and cap conjoin in Fig. No. 2.

13th Cross-Inter. Is the bottom piece of that rod shown there ?

Ans. It is not.

14th Cross-Inter. Suppose I should take Exhibit J. T. Jones in my hand and place it on the cap of a can for the purpose of soldering, and after melting the solder all around the crease of the can I should press with my hand upon the centre rod, and lift the tool an inch or two inches above the cap, still holding my hand
145 tightly pressed upon centre rod until the solder had become properly set and hardened, do you believe it would blow in that case ?

Ans. If there was any hot air in there it would be sure to come out somewhere, forming a leak.

15th Cross-Inter. Suppose the vent, instead of being placed in the top of the cap, should be placed in the top of the can, between the cap and the periphery of the top of the can, would there be any necessity in that case for a vent in the tool at all ?

Ans. I think not, because you already have your vent in another place.

16th Cross-Inter. In a portion of your answer to the sixth interrogatory-in-chief, in speaking of Exhibit J. T. Jones, you say that you would have to place your solder all around the cap, or nearly so, what form or shape of solder did you have in your mind when you made that statement ?

Ans. A segment of a circle laying in the crease of the can.

17th Cross-Inter. Look at the piece of solder wire now shown you, marked Exhibit McMurray No. 4, and state whether if solder wire of that form were used in the crease of the can, it would go sufficiently around to get it to flow ?

Ans. I think it would.

18th Cross-Inter. As to another objection to the Exhibit J. T. Jones, you have stated that the centre piece would get hot, and heating the centre piece would cool the soldering iron off ; is it your

opinion that the soldering iron would be cooled off before a can was soldered?

Ans. That depends a good deal upon how hot the iron was.

19th Cross-Inser. How many degrees of heat are required to melt solder?

Ans. That is something I never have scientifically tested.

20th Cross-Inter. Of what is solder composed?

Ans. Of lead and tin.

21st Cross-Inter. In what proportion?

146 Ans. The best solder is made one-half lead and one-half tin; but it is more or less adulterated with lead; I am not a manufacturer of solder.

22d Cross-Inter. What degree of heat is required to melt tin?

Ans. I have never tested that scientifically.

23d Cross-Inter. What degree is required to melt lead?

Ans. I have never tested that either; I never had use for it in my business.

24th Cross-Int. Do you mean to say that you are testifying upon the subject of heat, and the iron heating the rod, without knowing what degree of heat it would require to perform the purposes of soldering with this tool?

Ans. We know by practice from the heat that we see and feel in the iron, that the iron is hot enough to do the soldering.

25th Cross-Inter. How many cans could be soldered with that Exhibit J. T. Jones, before the centre rod would cool the soldering iron, to such an extent as to impede it in melting the solder?

Ans. If I were to heat this iron to what I would deem a proper heat, without oxidizing it, I do not think that I could solder more than three or four cans without again heating it.

26th Cross-Inter. Suppose it was made of copper?

Ans. That alters the case.

27th Cross-Infer. How many cans could you solder with copper without cooling the copper iron?

Ans. I think by being very quick you might solder from six to eight.

28th Cross-Inter. Suppose that soldering iron were made of copper as thick at the top as the copper shown at the top of of the Ewalt & Tillery model, and this thickness were continued all around and extending half way down or more before it began to taper, how many could you solder in that case before the iron would be cool? (Objected to.)

Ans. The number would be increased in proportion to the quantity of metal added, and to the degree of heat there was
147 in the iron. I can't say how many cans you could solder with an iron of that description.

29th Cross-Inter. Are not soldering tools usually called soldering irons, whether made of copper or of other material? (Objected to.)

Ans. They are.

30th Cross-Inter. How long have you known copper soldering irons to be made and generally known?

Ans. About forty years, I reckon.

31st Cross-Inter. Having read as you say the specifications of the Bostwick patent, is there anything contained in them which would prohibit you from making a tool of that description of copper?

Ans. I did not see anything, from my recollection.

32d Cross-Inter. Did you read this part of the description in the Bostwick patent in speaking of the construction of this tool, "it consists of a cylinder of *metal* made thick to retain heat," or did that language escape your notice?

Ans. I don't recollect noticing that.

33d Cross-Inter. Suppose, as a mechanic, I were to ask you to make that soldering iron, and should tell you to make a cylinder of metal, thick to retain heat, would you under those instructions feel at liberty to make the tool of copper, and as thick as you pleased to serve the purpose?

Ans. I would not receive an order without specifying the dimensions or the metal.

34th Cross-Inter. Suppose you did receive it; answer the question under those circumstances?

Ans. If I did receive such an order, I would use my own judgment in the make of it.

35th Cross-Inter. You have also stated as an objection to this Exhibit J. T. Jones, that "the workmen manipulating it, to cause the solder to flow all around the cap, would naturally cause it to lose its equilibrium, on account of not having any way of holding the centre piece on the cap, which would naturally be too hot for him to hold with his hand." Now, suppose that iron is hot,
148 and I take in my hand a piece of newspaper and hold the rod with it, would this be sufficient to keep the tool steady without burning my hand?

Ans. Yes; if the paper was thick enough to keep the heat from coming through.

36th Cross-Inter. Suppose I should dip the top end of the rod into water before putting it on the cap, could I then hold it without destroying the equilibrium, and without using the newspaper? (Objected to.)

Ans. Not if it was the length as shown in Exhibit J. T. Jones, because the heat of the iron would burn your hand.

37th Cross-Inter. What length does the patent tell you to make that rod?

Ans. It tells you nothing about it.

38th Cross-Inter. Then if I were to make it a little longer, say three inches, the heat of the soldering iron would not burn my hand, would it?

Ans. It would.

39th Cross-Inter. Suppose I should make it six inches longer, would it burn then?

Ans. I do not think that anything less than twelve or fourteen inches would prevent your hand from being burnt by the soldering iron.

40th Cross-Inter. Suppose I should make the rod long enough to keep from burning my hand by the iron, and should have a dozen cans in a row and a dozen rods, one on each cap, what would prevent me from placing the iron over each of these rods successively, leaving the rod standing to hold the cap in place after the operation of soldering were completed? (Objected to.)

Ans. It would be a very unhandy operation; nothing would prevent you, unless you were too low to reach up to put the tool over the rod.

41st Cross-Inter. Do you know of any man or boy capable of using a tool at all, and not a dwarf, who could not reach up the twelve or fourteen inches, which you have said would be sufficient?

149 Ans. That depends upon the benches on which the cans are fixed.

42d Cross-Inter. You say in your answer to the eighth interrogatory-in-chief, "that an even pressure could be obtained by letting this solder first melt under the iron, then turning it very carefully," suppose I should use a piece of wire solder, as shown in Exhibit McMurray No. 4, what would prevent you from placing the iron on that sort of wire and letting it melt?

Ans. I don't see anything that would hinder me from placing it on that wire and letting it melt.

43d Cross-Inter. Inasmuch as you have read the specifications in the Bostwick patent, let me ask you if you have read the following, or if it escaped your attention altogether: "After the iron has been properly heated, it is slipped over this rod, and the rod being then placed upon the cap is held thereon firmly, while the lower rim of the heated iron, duly supplied with solder, bearing upon the joint of the cap with the vessel, will instantly solder and secure the same about its entire circumference?"

Ans. I have read that.

44th Cross-Inter. How many cans have you ever soldered or have you seen soldered with a circular iron?

Ans. I never saw one of them used of this description to my knowledge.

45th Cross-Inter. Suppose this soldering iron were placed over solder wire, as shown in Exhibit J. T. Jones, and held there until the solder wire was melted, as described in the patent which I have just read to you, how much turning, if any, would be required to make the solder flow evenly around the joint?

Ans. I think it would take a revolution to distribute it equally on account of this opening here. (Witness points to the opening in the soldering wire, being about half an inch.)

46th Cross-Inter. Suppose I cut my solder wire in such slices as

would just about fit around a crease of a can, how much turning of the iron would then be required?

150 Ans. If the wire fit the crease exactly, it would require no turning, in my opinion.

47th Cross-Inter. You state in answer to your seventeenth interrogatory-in-chief, that the vent is placed in the cap because the cap was the last piece put on the can; you also stated in your cross-examination, that the vent might as well be in the top of the can, anywhere outside of the cap, as well as if it were in the cap, and would serve the same purpose; can you explain the discrepancy between your two answers? (Objected to.)

Ans. The cap being the last thing put on the can, the vent is placed in the cap, because it answers for a centre to hold it down by while capping, as well as a vent.

48th Cross-Inter. Then I understand you, that unless the rod in the tool used WERE a POINTED CENTRE rod, there would be no necessity for this vent in the center of the cap, and it might be placed anywhere else in the head of the can, with equal effect?

Ans. I think it might.

49th Cross-Inter. As another objection you state in your answer to the 18th interrogatory, in speaking of the rod in Exhibit J. T. Jones, "that the bottom of it would cover too much of the space of the cap, it would be in the way of the soldering iron,"—place Exhibit Jones, if you please, on the can in front of you in proper position, and state whether the bottom of that rod is in the way of the soldering iron?

Ans. The bottom of *this* rod is not in the way of *this* soldering iron.

50th Cross-Inter. I read to you now one of the functions of that rod, as described in the patent—"To hold the latter, (meaning the cap,) down firmly until it has been secured by the solder, and at the same time to guide the iron to its *proper place upon or against the rim or edge of the cap*;" I now ask you as a mechanic, would you construct a soldering tool of that description, so that the rod would be in the way of the soldering iron, in the face of the

151 instructions contained in the patent, "that the rod is to be made so as to guide the iron to its proper place?"

Ans. I would not make the rod to be in the way of the soldering iron. This centre rod is not a guide for the soldering iron at all to go into the crease, this centre rod does not guide the soldering iron to the crease, because the centre piece may be set on one side of the cap thus, (and witness moves the Exhibit J. T. Jones to the side of the cap,) but the soldering iron when put in the crease finds its own guide—guides itself.

(Complainants' counsel also cross-examines this witness with regard to what he has testified about the Barker iron, without waiving his objection to this witness' testimony upon these tools and patents.)

51st Cross-Inter. You have stated in your examination-in-chief that the rod of the Barker iron, when turned round, would have a tendency to throw the cap a little one side, the solder being melted, &c. Suppose a small hole is made through the disc on top of that soldering iron to allow the rod to pass through and be placed upon the top of the cap of the can, the tool is then revolved until, as you say, the rod describes a circle upon the top of the cap, would this movable rod, as there shown, turn the cap one side in the operation of soldering? (Objected to.)

Ans. This small piece of copper wire would not turn the cap.

52d Cross-Inter. Why not?

Ans. Because it is too weak.

53d Cross-Inter. Do I understand you then, that it requires a rod of some strength to turn that cap one side while the iron is revolving?

Ans. Of course. If this small rod is made of sufficient strength to perform the work for which it is intended, it has a tendency to throw the cap one side.

152 54th Cross-Inter. Do you mean to say that after I had melted the solder with that tool I could not hold my hand upon this rod whilst I lifted the tool with the rod resting upon the cap, and hold the cap in place until the solder had hardened?

Ans. You could hold the cap in place wherever that rod would level it to this. (Witness places his finger firmly upon the edge of the cap), and says, it would throw the opposite edge up.

55th Cross-Inter. Suppose the rod rested upon the cap, about half-way between the centre hole and the edge, and not on the extreme edge, as you showed with your finger, would it then turn the cap up?

Ans. It would if the cap did not fit perfectly.

56th Cross-Inter. Have you read the specifications of the Barker patent carefully?

Ans. I have read them tolerably carefully.

57th Cross-Inter. What does it say about the size of the rod? (Objected to.)

Ans. I think it makes no reference to the size of the rod.

58th Cross-Inter. I read you the following passage in the Barker patent: "At the side of the rod I connect a small rod or WIRE D with a loop or ring, connecting it with the handle." Would the description of that small rod or wire D be answered by this small wire in Exhibit McMurray No. 3?

Ans. I think not, because it is too small for any practical use in this matter.

59th Cross-Inter. As you have already said that that rod is sufficient to hold the cap in place, when the tool is lifted, and as the patentee says he uses a small rod or wire, why is it insufficient for practical purposes?

Ans. I did not mean to say that about so small a rod as this.

60th Cross-Inter. Suppose the tool were placed over the solder

wire, which has been cut in such lengths as to about fit the
153 crease, and the tool held in that position until the solder were melted, how much rotation of the iron would be required to spread the solder evenly around the lid? (Objected to.)

Ans. If the solder were cut to fit the crease perfectly it would require no rotation.

61st Cross-Inter. In one of your answers to the testimony-in-chief, whilst speaking of the Barker iron, you testify that the iron and the rod would all heat together on the same end the soldering iron is on; suppose I should cut off a piece of the movable rod and pull it back until the iron was heated, would they all heat then on the same end the soldering iron is on? (Objected to.)

Ans. It would not if you kept it far enough from the fire; but when the movable rod is shoved back into the hot iron, the hot iron will heat the movable rod.

62d Cross-Inter. Suppose, now, instead of cutting this movable iron off, I should push it down through the disc and put the end of it in water, would it heat then? (Objected to.)

Ans. Not if the water was cold, and you would let it stay there long enough.

63d Cross-Inter. Suppose I should make the handle of the tool of wood, and the upper end of the movable rod also of wood, would there be any trouble about using the tool then on account of the heat? (Objected to.)

Ans. Not if you had the wood far enough from the iron. I should say twelve or fourteen inches.

64th Cross-Inter. How far is the wood from the iron in the Ewalt & Tillery model—how far would a man's hand be from the heated iron whilst using that tool?

Ans. I suppose about four inches.

65th Cross-Inter. If a man's hand would not burn, being four inches off in the Tillery tool from the heat of the iron, why would it require twelve or fourteen inches in the Barker tool to keep it from being burnt?

Ans. Because I consider that the handle of the Ewalt & Til-
lery iron is too close to the metal. The heat will naturally
154 go up through that metal into the handle and heat the metal in the handle and the wood also. I have experience every day in this matter.

66th Cross-Inter. Then I understand you, so far as the heat is concerned upon the hand of the operator, coming from the iron, there would be the same objection to the Ewalt & Tillery tool that there would be to the Barker?

Ans. There would in the construction of the metal around the handle the way it is.

67th Cross-Inter. You say you have never seen a can soldered with a tool like the Bostwick, do I understand you to say that you have never seen a can soldered with a circular tool of any description?

Ans. I never have. I have seen a tool not exactly of the make of Ewalt & Tillery tool, but of its general construction, in use in the packing houses.

68th Cross-Inter. Are you familiar with the use of solder wire for sealing cans?

Ans. I have seen it used.

69th Cross-Inter. In using solder wire, do you think a tool in the form of a segment of a circle would economize the solder or cause it flow better than a circular iron?

Ans. I don't know that it would.

70th Cross-Inter. You have said that if you were the Commissioner of Patents, you would have given to Ewalt & Tillery a patent for the hole in the end of the rod, do you consider the hole in the end of that rod indispensable? (Objected to.)

Ans. I do, if the vent is in the centre of the cap.

71st Cross-Inter. Put the rod which I now hand you, marked "Jones Rod" into the Ewalt & Tillery model, and state whether that would serve the purpose equally as well as a rod with a hole in the end?

Ans. I think not.

72d Cross-Inter. Does not that rod leave ample space for the steam or hot air to escape around its sides?

155 Ans. It does when first made and kept perfectly square on the end.

73d Cross-Inter. Then so long as it is kept square or flat on the end it would serve the purpose equally as well as a rod with a vent in the end?

Ans. That is, provided it is made narrow enough in the broad part of it, to centre itself in the centre of the cap; I hardly think this rod is broad enough with its present shape; with the proper pressure on the cap it would nearly or quite close the vent.

74th Cross-Inter. You say this rod would serve the purpose so long as it would keep broad and flat at the end; what would prevent it from keeping so?

Ans. Because constant use would wear it to the shape of the centre of the cap.

75th Cross-Inter. Would not the same causes shut up the little hole in the end of the Ewalt & Tillery rod?

Ans. Not so much so, because in this rod the vent hole is drilled a half an inch up in the rod, and wears the same on one side as the other, while in Exhibit "Jones' Rod," the wear is on the outside of the point, causing it always to wear to a point.

76th Cross-Inter. Is not the little hole liable to be clogged with dirt?

Ans. It is, if the workman is not careful to keep it clean.

77th Cross-Inter. Look at Exhibit J. T. Jones No. 2, and tell me who made it?

Ans. I don't know; I saw one like this at Mr. Brown's office last Friday, I think.

78th Cross-Inter. Hold this movable rod in your hand so as to make a pivot of it, hold the ring of the other rod in your other hand and rotate it; how far can that be rotated in that way?

Ans. Scarcely an eighth of an inch.

70th Cross-Inter. Look at the hole through which that mov-
156 able rod passed in that exhibit, and state whether it is large enough to allow the steam or hot air to escape, which issues from the vent hole in the top of the cap?

Ans. I think it is.

80th Cross-Inter. You say you would have given Ewalt & Tillery a patent for a combination; what have Ewalt & Tillery a patent or patents for?

Ans. I don't know what they have a patent for.

81st Cross-Inter. For what combination would you give them a patent for?

Ans. Combining the centre rod and the revolving iron with the vent hole in the end of the centre rod.

JOHN T. JONES.

Subscribed and sworn to before me this 24th day of February, 1880.

ISAAC BROOKS, JR.,
Examiner.

Then adjourned to February 25th, 1880.

February 25th, 1880.—Commission met. All counsel present.

William D. Brooks.

WILLIAM D. BROOKS, a witness examined on behalf of the defendants, after being duly sworn, deposes and says, as follows:

1st Interrogatory, State your name, age, residence, and occupation?

Answer. My name is William D. Brooks; I am fifty-two years of age: I reside No. 155 Jefferson street; I am a tin and sheet iron worker by trade; I have been in the packing business and manufacture of tin cans, and capping and making tin cans, (oyster and fruit cans,) more or less since 1849.

157 2d. Inter. What, if anything, do you know about patents and drawings of patents?

Ans. I have thorough knowledge of all the capping irons that have been used by the trade to the present time. I have a pretty thorough knowledge of drawings and patents, as I have been engaged in making and getting up capping machines and can soldering machines.

3d Inter. What experience, if any, have you as a mechanic in making machines or devices from drawings and specifications?

Ans. The only knowledge I have is from making machines from my own drawings.

4th Inter. Have you, or not, examined drawings and specifica-

tions in patents generally; and if so, are you able to make any machine from the drawings and specifications? (Objected to.)

Ans. My knowledge principally extends to the can making and capping machines, which I have examined very carefully; there are some machines that I can make in a machine shop or brass furnishing shop myself; there are other machines with complicated motions, cams, wheels, and palls, ratchets, &c., that I could not make, and would have to get a machinist to make the same.

5th Inter. After any machine for capping cans is made, are you or not enabled to tell whether the machine is like the drawings and specifications of the patent? (Objected to.)

Ans. That would depend upon what purpose the patent was intended to be used for; if it were intended to be used for making cans or capping cans, I think I could thoroughly understand it, because I have been working on said machines and getting up and constructing them since 1853.

6th Inter. Look at the Barker and Bostwick original patents, their drawings and specifications, state whether or not you have examined them before; and if so, state whether there are any machines in this room constructed from these patents, and if so, which are they?

158 (Complainants' counsel objects to the examination by the witness of any patents or drawings whatever, or giving his opinion thereon, or to the comparison of any machine with said patents or drawings.)

Ans. I have examined them; there are two machines on this table constructed like said patents—Exhibit J. T. Jones is an iron made after the Bostwick patent, and Exhibit J. T. Jones No. 2, is made after the drawings of the Barker patent.

7th Inter. What is the chief object to be attained in capping a can?

Ans. It is to hermetically seal it steam tight, so that the can can be processed with a heavy pressure inside, obtained by immersing it in chloride of calcium, 240 degrees Fahrenheit, a specified time, so as to insure the keeping of the goods; the pressure would be in the inside of the can fourteen pounds to the square inch.

8th Inter. State whether or not a Bostwick iron can practically be used to cap a can air tight, and give all your reasons for what you may say. (Objected to.)

Ans. A workman might cap cans with the Bostwick iron very imperfectly. In using the said iron, he would be compelled to use the straight iron, Exhibit Platt, to mend the defective parts in the crease, to insure safe capping. The Bostwick iron has a large iron rod, with an enlarged end at the bottom, which covers the entire surface of the cap, except the crease and edges, preventing any exhaust from the vent in the cap, whilst the iron is slipped on said rod, over the top, which guides the rod into position, on the top of the cap, at the same time fits the crease or V circle, which the

edge of the cap rests in. The iron can be oscillated in the crease, by holding the rod with a pair of tongs if hot, or a rag if tolerably hot. In using the said iron in capping a can, you would necessarily be compelled to use an entire circle or nearly so of solder wire.

159 Another objectionable feature in using the iron would be, that the soldering iron being directly under the hand, would burn the hand of the operator. The next objection would be, that there is no means shown on the rod by which the operator could handle the rod and steady it, whilst the iron is guided down over the rod. The next objection would be, that the rod and button on the lower end would soon become heated, and cause the button or bottom end to heat the cap, and melt the tin on the cap, so that the solder in the crease would run over the flange, and run inside on the fruit or oysters in the can, and leave those little ugly shaped pieces of solder, which are formed in pouring metal, lead or solder, out of a ladle in water, like those made by girls trying their sweethearts, and make it dangerous to the persons eating the goods, on account of swallowing the same. The said iron I have never seen from 1859 in the city of Baltimore, or in any other city that I have been in, in the United States.

9th Inter. How about obtaining an evenness of pressure by the handle on the side?

Ans. You cannot obtain an evenness of pressure, because you cannot rotate it perfectly true on the surface of the crease at the bottom of the iron.

10th Inter. State how long comparatively an iron constructed like the Bostwick would retain the heat?

Ans. That would depend entirely upon the coolness of the rod.

11th Inter. Would or would not the hollowness of the iron, and the thinness of its side, affect somewhat the retention of the heat?

Ans. It would on a cold rod.

12th Inter. Would a hollow thin iron, to say nothing of a rod being cold or hot, retain heat as long as a thick iron constructed like the iron in the Ewalt & Tillery model?

Ans. No, sir; the Tillery iron being made of copper, and the Bostwick iron, made of copper or iron, placed upon a hot rod, like the Bostwick, made of the same weight of metal, would retain the heat nearly as long as the Tillery iron.

160 13th Inter. What material practical difference, if any, is there between the use of an entire circle and a segment of a circle in soldering?

Ans. The difference is, in the entire circle you are compelled to use a circular ring of solder wire, or nearly so, whilst in the segment of a circle like the Tillery iron, you can use a very small drop of solder, and manipulate it with the iron, so that it will flow evenly around the crease; with a segment of a circle you can solder a cap on a can with about one-half the metal.

14th Inter. How about the operator's ability in the use of a circle or segment of a circle to see the work as it progresses?

Ans. In a circle the workman can't see the solder being manipulated, whilst in a segment of a circle he can see the edge of the iron distributing the solder evenly around, and can see by the eye when the soldering is complete.

15th Inter. State whether or not the Barker iron can be practically used to cap cans, so that they will be air tight, and give the reasons for your opinion? (Objected to.)

Ans. No, sir; it cannot; my reasons are, first: It has to be laid on the outer edge of the cap, and the outer edge of the crease, resting on the can and cap, and you are necessarily compelled with the Barker iron to use an entire circular ring of wire, and the iron would so heat the cap that when the rod was pushed down to hold the cap off the centre, and the iron withdrawn, the cap being heated, would spring or warp, and the metal would either blow and form pin holes, or the solder would run inside of the can.

Second. The iron handle shows no means by which the operator, (witness here states that he has made a mistake with reference to the rod, and asks the privilege of correcting it, and says as follows:) The rod has no handle, and I can't see by what means he could use the rod combined with the iron, as constructed, without burning his right hand; at the same time the centre rod or handle would have to be some twenty-four inches long to prevent burning
161 the left hand with the handle, and no rotation could be made in a true circle by having the rod firmly upon the cap. In my opinion, as an old capper, I would rather use an ordinary hollow ring, leaving the vent free to exhaust, and apply the ring on the ring solder, in the same manner described in the Bostwick patent.

16th Inter. Can an iron constructed like the Barker patent be heated without heating the movable rod?

Ans. No, sir; it cannot.

17th Inter. What movement, if any, would the movable rod have on the cap during the process of soldering, and what effect, if any, would that movement have on the cap?

Ans. If the iron was rotated, the rod and the iron would both have a tendency by the friction of both bearing on the top of the cap, to turn the cap in the crease and disturb the solder. The movable rod would form a circle as the iron was turning round; that movement would have a tendency by its friction to turn the cap around, and make an imperfect soldering.

18th Inter. How about the effect of the bottom of the soldering iron, being constructed as shown in Fig. 1, of the Barker Original Patent? (Objected to.)

Ans. It would not have a free exhaust, because the hollow recess in the bottom of the iron would act somewhat as a receiver or steam drum, and the air or steam, ascending through the vent hole, the iron being so much hotter than the water or steam, would expand the air or steam, and have a tendency to check a free vent of the exhaust in the cap, as shown in figure 1 in the drawings.

19th Inter. In capping a can with a crease, what effect would be produced by using a circular iron, whose edges rest on the crease, and are flat instead of bevelled?

Ans. If the iron was revolved, the soldering would be imperfect in all cases.

20th Inter. It is not possible to cap a can without the use of a soldering iron made for that purpose?

Ans. Any tinsmith's iron would cap a can.

162 21st Inter. State whether or not any kind of iron, if heated, of the proper size to rest upon the crease, cannot be used to cap a can?

Ans. I have already stated that a circular iron made flat upon the bottom, placed upon the ring of solder like that edge shown in Exhibit J. T. Jones No. 2, would cap a can, the exhaust being free, better than the Exhibit Jones No. 2. I mean a circular ring of iron, with flat soldering edges, with an opening in the centre. You can melt solder in an imperfect manner, and can cap cans in an imperfect manner with any kind of iron, if heated, by resting it upon the solder, and using the ordinary flux.

22d Inter. Do you or not consider the Barker and Bostwick patents any improvements on the old soldering iron, Exhibit Platt?

Ans. I think not, in the way of facilitating capping cans.

23d Inter. If as a practical capper you had a contract for capping cans, and had your choice of using the old iron or irons made after the Bostwick and Barker patents, which would you use?

Ans. I would use the old straight irons always, because I could cap three times the amount of cans, and perfectly.

24th Inter. You have examined the Barker drawings and specifications, state whether or not a loop or ring on the movable rod at its top, in Exhibit J. T. Jones No. 2, is attached, as set forth in the drawings and specifications of that patent?

Ans. They are identically the same.

25th Inter. Look at the Ewalt and Tillery Model, explain its mode of operation, and what material effects, if any, are obained by this iron which cannot be obtained by the Barker and Bostwick irons.

Ans. The operator first withdraws the rod and places the copper soldering iron in the furnace, then draws it out and slides the rod down through the centre handle, pressing it upon the vent hole of the cap, pressing his left hand on the handle of the rod, slides

163 the iron down with his right hand, holding the handle of the iron, places the bottom of the soldering tool upon the piece of solder, and when it becomes melted, revolves the iron around in the crease, distributes the solder evenly with the point of the iron, then raises the iron out of the crease—still bearing his left hand firmly on the handle of the rod—allowing the metal to cool and set, and then withdraws the rod and iron from the can, and goes on in like manner with the other cans.

(The witness asks counsel for defendants what effects he alludes to—whether to economy of solder or to speed. Counsel for defendants answers that he means both.)

With the Tillery iron you can cap faster and economize solder and use less solder than the Barker or Bostwick irons?

26th Inter. What as to the quality of the soldering?

Ans. I think the soldering is better done.

27th Inter. What similarity is there in appearance between these three irons? (Objected to.)

Ans. In mechanical construction I don't think there is any similarity.

28th Inter. In the Ewalt & Tillery the iron revolves around a centre rod; state whether or not such an effect is produced in the Barker iron?

Ans. No, sir.

29th Inter. What about evenness of pressure obtained by the Tillery iron?

Ans. On the Tillery iron you can get an evenness of pressure by pressing the rod with the left hand and revolving the iron with the right hand, while in the Barker and Bostwick you cannot.

30th Inter. Is there or not in the Bostwick iron any centre rod to hold the cap in place and to regulate the soldering iron?

Ans. There is a rod shown in the Bostwick iron, but the rod does not guide the iron; the iron has to guide the rod, as shown in the drawings.

164 31st Inter. If you were Commissioner of Patents, and patents had been granted to Barker and Bostwick, as shown in these patents, would you or not grant a patent for the Ewalt & Tillery iron? (Objected to.)

Ans. I would, because I think there is no similarity in mechanical construction.

32d Inter. What effect would be produced upon square cans by the use of circular soldering irons?

Ans. The top edge being only about an eighth of an inch from the hole to the centre edge of the can, when the circular iron was placed upon the can, before you could make it perfectly tight, the head in the centre would unsolder and fall out.

33d Inter. What care has to be taken in soldering a square can, even with a segment of a circle, to prevent the unsealing of the top of the can where it connects at the narrow side of the can?

Ans. The operator has to bear very lightly upon the centre rod, and work the point of his iron around the crease very rapidly to prevent the unsoldering the head from the body of the can.

(Counsel for defendants herewith file the following Exhibits: Tillery No. 1, No. 2, No. 3, also "Hay,"—also Defendants' Exhibit "Assignment.")

34th Inter. Look at Fig. 3 in Exhibit Hay, and state whether or

not it contains a combination of a rod holding the cap and a soldering iron? (Objected to.)

Ans. It does.

(Counsel for defendants herewith files Defendants' Exhibit "Centre Rod.") (The filing of the above Exhibit is objected to by counsel for complainants.)

35th Inter. Look at Exhibit "Centre Red" and state for what purpose, if any, you have seen a rod like it used, and how long ago? (Objected to.)

165 Ans. I have seen a rod, but not constructed with a lever like Exhibit "Centre Rod."

(All testimony on this exhibit objected to by counsel for complainants, since the witness has testified that he has seen a rod, but not with a lever like that.)

I have seen a rod, used and constructed like fig. 3, shown in Exhibit Hay, with a spiral spring to allow it to yield; it was used for capping the old original plumb can—they used to plumb the cans in those days.

36th Inter. What office did that rod perform?

Ans. The office of holding the cap down on the can whilst the workman performed the office of soldering.

37th Inter. In what way was this rod held on the cap?

Ans. Perpendicular, covering nearly the entire cap.

38th Inter. What I wish to know is, how the rod was held down on the cap?

Ans. The rod slipped through the collar above the spiral spring, around the rod, pressing against a collar near the bottom. I mean the rod slipped through a collar in the stand or holder, and a spiral spring slipped around the rod, so as to act with elastic pressure between the collar and the eye above. The rod was raised by the hand and the can placed under it, and then the spiral spring held the cap down.

39th Inter. How long since you saw this rod used?

Ans. I made one and used it myself in 1853, in Mr. Joseph F. Reeves' cellar, on Pratt street, and capped plumb-cans with it myself.

Cross-examined by Mr. PRICE:

1st Cross-Inter. Did you hear the testimony of Mr. J. T. Jones, given on yesterday and Saturday last?

Ans. I heard part of his testimony yesterday; on Saturday I was in Washington.

166 2d Cross-Inter. Did you and Jones agree together as to what objections you should urge against the Barker & Bostwick irons, as far as their practicability was concerned?

Ans. No, sir.

(Complainants' counsel proposes to cross-examine this witness

upon the things about which he has testified without waiving any objection he has made to the witness or to his testimony.)

3d Cross-Inter. In your answer to the 6th interrogatory-in-chief, you state that Exhibit J. T. Jones No. 2 is made after the drawings of the Barker patent—the question, to which this was an answer, required you to look at the drawings and *specifications* of that patent, and you answer as to the drawings only—did you leave out the consideration of the specifications in your answer intentionally or not?

Ans. I did not intentionally.

4th Cross-Inter. Who made the model J. T. Jones No. 2?

Ans. I do not know.

5th Cross-Inter. What instructions did the workmen receive in making that model that you are aware of?

Ans. I don't know, because I don't know who made it.

6th Cross-Inter. Do you now say that that model is constructed in accordance with the description contained in the specifications in the Barker patent?

Ans. It is constructed in accordance with the drawings in the Barker patent.

7th Cross-Inter. Question repeated.

Ans. I do not know about whether it is constructed according to the specifications.

8th Cross-Inter. Look at the recess in the under side of Exhibit J. T. Jones No. 2, and say if it is constructed to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover?

167 Ans. No, sir; it is constructed in accordance with the drawings to cover a portion of the cap and can, like that shown in the drawings.

9th Cross-Inter. I understand you then to say, that as constructed, it will not give room for the convex lid of the can, and confine the soldering process to the outer edge of the lid or cover?

Ans. No, sir; it will confine itself to press upon the top of the can, and edge of the cap at the same time, over the crease, the bottom of the iron being flat.

10th Cross-Inter. Question repeated?

Ans. It will give room for a portion of the cap, but yet the iron bears on a portion of the edge of the cap and edge of the lid. I have reference to the iron as show in the drawings and the can.

11th Cross-Inter. My question referred to the construction of J. T. Jones No. 2, I therefore repeat the question again, and ask you to confine yourself to that model as constructed?

Ans. If the cap was made small enough, or the iron made larger, the convex cap would have room, and the iron would rest on the crease to be soldered.

12th Cross-Inter. In an ordinary cap for an ordinary can, such as has been exhibited here, would that iron as constructed give room

for the convex lid of the can, and confine the soldering process to the outer edge of the lid or cover?

Ans. It would not, unless the cap was made small enough to fit the recess in the iron.

13th Cross-Inter. As the caps are made on ordinary cans like Exhibit McMurray No. 5, I understand you that this iron as constructed would not give room for the convex lid of the can?

Ans. This iron J. T. Jones No. 2, would not.

14th Cross-Inter. You say that you are a practical capper of long experience, are you sufficiently familiar with the business to know when a job is well done by looking at it?

Ans. Yes, sir.

168 15th Cross-Inter. You say that one of the chief objects in capping is to hermetically seal a can steam tight, so that the can can be processed with a heavy pressure inside; could you tell whether a can had been so processed or not by looking at it?

Ans. I could by the external appearance of the tin.

16th Cross-Inter. Suppose I should give you a tool like Exhibit J. T. Jones No. 2, which is so constructed that the recess in the under side would not give room for the lid or cover of a can, and ask you to use said tool with a cap upon a can, like the cap shown in the Bostwick patent, what position would that tool occupy, and how would it stand with reference to the can? (Objected to.)

Ans. In soldering the nozzle or cap on an oil can, it would cover the cap and the cap fit in the recess, and the edge of the iron bearing on the bottom flange of the cap, the iron would be perpendicular.

17th Cross-Inter. Question repeated.

Ans. The iron would slip over the cap like a ring over a blacking box lid, and the bottom edge of the iron would rest upon the top surface of the cap, at the same time the inner surface of the iron rests against the outer side of the cap. If the recess were made deeper in the bottom of the iron, the bottom of the iron would not rest upon the top of the cap.

18th Cross-Inter. How could this iron slip over the cap, if the recess were not made so as to give room for it?

Ans. There is no recess shown in the nozzle in Exhibit Bostwick Original.

19th Cross-Inter. My question was, how could a tool like J. T. Jones No. 2, slip over the cap if the recess were not made so as to give it room to slip over?

(Counsel for defendants objects to the question, because Exhibit Jones No. 2, is not constructed for the purpose of sealing nozzles on cans.)

Ans. I have already stated that if it was turned out deep enough that it would fit over the nozzle or cap, without resting
169 on the cap, and the iron would be in a perpendicular position.

20th Cross-Inter. I now desire to ask you again to take Exhibit Jones No. 2 in your hand and suppose that the recess is NOT constructed so as to give room for the lid of the can, what position would that tool occupy if used upon a can with a cap like that shown in the Bostwick patent? (Same objection.)

Ans. It would rest upon the top of the cap, and part of it would project beyond the cap.

21st Cross-Inter. Now suppose I should ask you to make a tool for soldering a cap on a can like Exhibit McMurray No. 5, and tell you to construct that tool with a recess in the under side, *so as to give room for the convex lid or cover of the can, and confine the soldering process to the outer edge of said lid or cover*, of what shape would you make that tool at the bottom?

Ans. If I were a machinist and I were to receive the instructions given me, I would make the recess large enough for the convex lid of the cap, but as a machinist not having the knowledge of a capper, I would not know exactly how to shape the point of that tool.

22d Cross-Inter. How would you make the tool so as to confine the soldering process to the outer edge of the lid or cover, would you make the tool so as to fit in the crease or not?

Ans. I would make it as I have stated, without instructions from the party who ordered it made.

23d Cross-Inter. Would a tool constructed at the bottom like Exhibit McMurray No. 3 be made in accordance with that description? (Objected to.)

Ans. It would.

24th Cross-Inter. Would a tool constructed like Exhibit McMurray No. 2 be made in accordance with that description? (Objected to.)

Ans. Yes. McMurray No. 3 and McMurray No. 2 are fac similes, only the recess in McMurray No. 3 is deeper and has a hollow vent in the side.

170 24½th Cross-Inter. Would a tool constructed like the two I now hand you be made in accordance with that description?

(Objected to because the tools have not been filed.)

Witness asks the instructions to be read, which the examiner did as follows: "With a recess in the under side, so as to give room for the convex lid or cover of the can, and confine the soldering process to the outer edge of said lid or cover."

Ans. If I had the instructions to make them in this way, I would make them so.

25th Cross-Inter. Under the instructions just read to you, are those two tools just shown to you made in accordance therewith? Objected to because the tools have not been filed.)

Ans. They are not. I would not have made the irons this way, I would have made them as I first stated, if I had been called upon as a machinist to make them; neither would I have made Exhibit

McMurray No. 2 and 3, in the way they are made, I would have made them as I stated at first, as I did not understand the question.

(Counsel for complainants files the two irons above testified to, marked Complainants' Exhibit Lang No. 1 and Lang No. 2, also Complainants' Exhibit J. D. W. model No. 1 and No. 2.)

26th Cross-Inter. Look at the two exhibits, J. D. W. model No. 1 and No. 2, and say whether the soldering irons in those exhibits are constructed with a recess in the under side to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover? (Objected to.)

Ans. They are.

171 27th Cross-Inter. You have said that you know a good job of soldering when you saw it by looking at it, and could also tell by the appearance of the can whether it had been processed or not; look at the five cans now shown you, say, first, whether they are well soldered or not; they are herewith filed and marked J. D. W. (Objected to.)

Ans. They are soldered tight, but the solder is all smeared on the caps from the iron resting on the cap.

28th Cross-Inter. Have these cans been processed? (Objected to.)

Ans. Yes, sir.

29th Cross-Inter. Have they stood the operation of processing perfectly or not?

Ans. Yes.

Then adjourned.

February 26th, 1880. Commission met. All counsel present; the cross-examination of the witness was then resumed.

30th Cross-Inter. Look at the two soldering irons, Lang model No. 1 and Lang model No 2, while I call your attention to some of the features of them. You will observe that both of them have flat edges, you will also observe that one of them is made of copper and the other is made of iron. If you are familiar with the Barker patent, what, if anything, is contained in the specifications of that patent which would prohibit a mechanic from making those discs of copper?

Ans. I don't know that there is any, if the mechanic received the order to make them like Exhibits Lang model Nos. 1 and 2.

31st Cross-Inter. I said nothing in the world about an order. I ask you only what was contained in the *specifications* of the letters patent which would prohibit a mechanic from making that disc of copper?

172 Ans. None to my knowledge, as I have not read the specifications in the original patent.

32d and 33d Cross-Inter. Have you read the specifications of the re-issued Barker patent?

Ans. I have, but not carefully; to my knowledge, I don't see any-

thing in those specifications preventing them from being made of copper.

34th Cross-Inter. Do the Barker patents original and re-issued, or either of them, limit the handles of the tool or the movable rod thereof to any special material?

Ans. I think not to my knowledge.

35th Cross-Inter. Might not a wooden handle be put on the top of the Barker iron, and also on top of the movable rod without violating any of the instructions given in the specifications of the Barker patent? (Objected to.)

Ans. That I have not read carefully enough to answer; in the drawings there was no wooden handle on either the rod or the handle.

36th Cross-Inter. Do you pretend to be able to tell of what material a device is made from a drawing?

Ans. No, sir.

37th Cross-Inter. If the handles were made of wood at their tops, and the iron rods the same lengths as those shown in the two exhibits of Lang, what difficulty would there be in the way of handling the iron so as not to burn the hands?

Ans. I think they could be handled.

38th Cross-Inter. If a soldering iron were used which rested on the cap and can, as you say would be the position of Exhibit Jones No. 2, what difference would there be in the use of that iron so made, and the use of an iron perfectly flat on the bottom, and without any recess at all?

Ans. The one perfectly flat on the bottom would cover the entire vent, and would have a tendency to rob the crease of solder, and cause it to flow over the top of the cap, and would have a tendency to close the vent and there would be no exhaust, and the cap would blow and be defective.

173 39th Cross-Inter. According to your last answer then, the recess in the bottom of the iron is placed there for a useful purpose; if this be true, what is its use or purpose?

Ans. The recess is placed there for a useful purpose—it is there to prevent burning the centre of the cap.

40th Cross-Inter. Is that the only useful purpose you can describe?

Ans. It was put there I think with the intention of given an exhaust to the vent.

41st Cross-Inter. What idea did the inventor have of this recess, and what does he tell you its function is in his patent?

Ans. I don't know; I never read the specifications sufficiently enough to understand.

42d Cross-Inter. Do you remember that he describes this recess to be for the purpose of giving room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover?

Ans. I do not.

43d Cross-Inter. You say in your answer to the 40th cross-interrogatory, that you thought the recess was put there with the intention of giving an exhaust to the vent, look at those same Lang Exhibits, and say whether the holes through which the rods pass in those tools would allow the steam or heated air to escape, which found its way through the vent in the cap.

Ans. It would partially, but not perfectly vent the can and exhaust the vent.

44th Cross-Inter. Now look at the two models R. D. W. Nos. 1 and 2, and observe certain peculiarities which I now call your attention to. You notice first, that the disks are both made of copper, one disk small and one much larger; you will also observe that the large disk has a short handle, and the smaller disk a much longer handle; you will also observe that the long handle and movable rod are made of much larger iron than the small handle and rod; you will also observe that the small handle has a rod made
174 of wire, say, if you please, if the mode of attaching the movable rod at the top is identical with that described in the Barker patent?

Ans. It is, with the exception in a small rod the eye of the movable rod is not welded together.

45th Cross-inter. My question rather referred to the fact, that it was rigid upon the top of the movable rod and loose upon the handle, so as to slide thereon?

Ans. The eyes are rigidly attached to the top of the rod and movable on the handle.

46th Cross-Inter. Now look at Lang model Nos. 1 and 2, and Exhibits R. D. W. Nos. 1 and 2, and say as a capper, which would do the best work of the four?

Ans. Exhibit R. D. W. No. 1.

(It is agreed all exhibits of cans and irons marked J. D. W. should have been marked R. D. W., and will be so considered.)

47th Cross-Inter. State why?

Ans. Because J. D. W. No. 1, has a V-shaped edge upon the bottom of the iron, and Exhibit J. D. W. No. 2, has a V-shaped edge. The vent is finer in No. 1 than it is in No. 2, by reason of the length of the iron shown in Exhibit No. 2 and the rod fitting closely in the hole, whilst in No. 1 the iron is shorter and the hole in which the rod slides through is larger. Both J. D. W. Nos. 1 and 2 are better irons for capping than Lang Nos. 1 and 2, because the soldering iron at the bottom of Lang Nos. 1 and 2, is square on the face and will not fit the V-shaped crease.

48th Cross-Inter. Suppose I should put J. D. W. No. 2, upon a can for soldering, might I not lift it up occasionally to look if the solder were spread evenly?

Ans. Yes.

49th Cross-Inter. In thus lifting it, might not the steam escape which came through the vent?

Ans. An automatic venting would be thus given.

175 50th Cross-Inter. Is there anything in the specifications of the Barker patents which would prohibit the making of that recess one-half or two-thirds the depth of the iron? (Objected to, as the specifications speak for themselves.)

Ans. Not to my knowledge.

51st Cross-Inter. You say Exhibit J. T. Jones is an iron made after the Bostwick patent—who made that tool?

Ans. I don't know.

52d Cross-Inter. Of what material does the Bostwick patent tell you to make the Bostwick tool?

Ans. Of iron, I think, to the best of my knowledge, but of no particular kind of iron.

53d Cross-Inter. Of what thickness does he tell you to make it?

Ans. He does not confine it to any particular thickness.

54th Cross-Inter. Suppose the vent should be placed in the head of the can outside of the cap, what necessity would there be for a vent in the tool?

Ans. It would be necessary to have a vent in the tool also, and if the hole was made on the outside, on the top between the cap and the outside rim, the goods packed in cans with such holes, would be considered damaged and unsaleable, by reason of being re-processed.

55th Cross-Inter. The question I asked you was, that if the vent were placed in the head of the can, between the body and the cap, what necessity there would be for a vent in the tool, please confine your answer to that question.

Ans. That question I can't answer unless you describe the style of soldering iron to be used.

56th Cross-Inter. Say a circular soldering iron of any description?

Ans. If the vent was in the head instead of the cap, there would be no necessity of having a vent in the center of the cap.

57th Cross-Inter. How long has wood been used for handling soldering tools?

Ans. For forty years, to my knowledge, probably longer, I don't know how long.

176 58th Cross-Inter. You say if you were Commissioner of Patents, and patents had been granted to Bostwick & Barker, you would grant a patent to Ewalt & Tillery for the Ewalt & Tillery iron; what would you grant a patent for on that iron?

Ans. For novelty and mechanical construction.

59th Cross-Inter. Would you grant them a patent for a tool mounted upon and revolving around a centre rod?

Ans. I would as so constructed.

60th Cross-Inter. Is not the Bostwick mounted on a centre rod, and does it not revolve around it?

Ans. The Bostwick iron rests upon the centre rod at the bottom and oscillates it by the handle.

61st Cross-Inter. What do you mean by plumbing cans under the old process?

Ans. Picking up the solder with the point of the iron and applying it over the seam of the bottom and top of the cans, almost three-sixteenths of an inch thick around the entire circle.

62d Cross-Inter. Is your last answer a description of what you mean by plumbing or not?

Ans. It is plumbing a can; not house plumbing.

63d Cross-Inter. What became of the old tool you made and used in Mr. Reeves' cellar on Pratt street?

Ans. It is lost and gone long ago.

Re-direct Examination by Mr. BROWN:

1st Re-direct Interrogatory. You say that in using either one of the four irons marked J. D. W. Nos. 1 and 2, and Lang model Nos. 1 and 2, you could raise up the iron to see how the work was progressing—when the movable rod should be heated could you take hold of it?

Ans. Not without a wooden handle or a pair of tongs or pincers.

2d Re-direct Inter. Then you could not raise the iron to examine the work by taking directly hold of that movable rod with the hand or fingers?

177 Ans. Of course not.

3d. Re-direct Inter. Suppose you raise the iron without taking hold of the movable rod, is the weight of that movable rod, as shown in either one of the four models last mentioned, considering its position as being on the side of the cap, sufficient to hold the cap properly down?

Ans. In Exhibit J. D. W. No. 1, the rod is sufficient to hold it partially down. In the other three the wire is not sufficiently heavy enough to hold the cap at all.

4th Re-direct Inter. In Exhibits J. D. W. Nos. 1 and 2 the bottom edges are bevelled, look again at the drawings in the Barker patent and state if any bevelled edges are shown there?

Ans. They are not.

5th. Re-direct Inter. You have described the Tillery iron as composed of a movable centre rod, resting upon the centre of the cap, in combination with the soldering iron, so constructed that the soldering iron is made to rotate around the crease, while the centre rod holds the cap in position and regulates the iron—state whether or not there is any centre rod around which the iron rotates in either one of the four last-mentioned exhibits.

Ans. There is not.

6th Re-direct Inter. Looking at those four exhibits, what office do you suppose the inventor intended those movable rods to perform?

Ans. He intended the movable rod to hold the cap in place while you removed the iron, allowing the cap to cool before he raised the rod.

7th Re-direct Inter. What degree of heat is required to melt solder used for capping?

Ans. If the solder is made one pound of tin and one pound of lead it requires 393 degrees of Fahrenheit to melt the solder; if the solder is made one of tin and two of lead it requires 475 degrees Fahrenheit.

8th Re-direct Inter. You were asked if from drawings you
178 could tell what material a device is intended to be made of, and you answered you could not; suppose a part of a rod in a drawing is intended to be of wood and a part of iron or copper, are you not able to tell from the drawing, if properly made, where the wood commenced and where the iron or copper ended?

Ans. Yes.

9th Re-direct Inter. Supposing the drawings in Fig. 2, Barker original patent, be correctly made to show what material was intended to be used in both of those rods and handle, would they show the use of any wood?

Ans. They would if they were made to show the wood and iron as you stated. No wood is shown in the Barker drawings.

10th Re-direct Inter. Is there or not any difference in the sizes of caps and of the depth of creases used in capping?

Ans. There are three sizes for caps, small, medium, and large; the creases vary a little in width, but not much. I mean caps used by the trade at the present time.

Re-cross Examination by Mr. PRICE:

1st Re-cross Inter. State whether the rod in J. T. Jones No. 2, is heavy enough to hold down the cap by its own weight?

Ans. It would partially, but not perfectly.

2d Re-cross Inter. State whether the little weights now shown you, filed in this cause as part of Exhibit McMurray No. 1, would be sufficient to hold down the cap of their own weight after the iron is lifted from the cap?

Ans. It would partially, but not perfectly, as the cap might spring or warp before cooling.

3d Re-Cross-Inter. Suppose a mechanic were using a tool like J. T. Jones No. 2, or either of the models J. D. W. Nos. 1 and 2, with a handle made entirely of iron, which burnt his fingers, do you suppose he would have sense enough to put a wooden handle on the end of it to keep his fingers from being burned?

179 Ans. I think he would, if he could find a place to put the handle on.

4th Re-cross Inter. Do you think he would know enough to cut off the ring or straighten it out, and then find a place to put the handle on?

(Objected to generally, and because it has not been shown that this witness is an expert in knowing how much sense every man has who ever operated a soldering iron.)

Ans. Some men might have sense enough, and some might not,

but I do not think he would cut the eye off of the movable rod, and put a handle on it.

5th Re-cross Inter. Might not the eye in that rod be just as well connected with a wooden handle, or with an iron one?

Ans. It might if a man knew how to construct it.

6th Re-cross Inter. Would you know how to construct such a handle? (Objected to.)

Ans. I would.

WILLIAM D. BROOKS.

Subscribed and sworn to before me, this 26th day of February, 1880.

ISAAC BROOKS, JR., *Examiner.*

The adjourned to February 27th, 1880.

February 27th, 1880, commission met. All counsel present.

JAMES H. BURRIS—Recalled.

James H. Burris desires to explain one of his answers in his testimony heretofore given before the examiner.

The statement I desire to make concerns Exhibit J. T. Jones. In working this machine it will cap cans providing the
180 centre rod is heavy enough not to move in working the outside casing of the machine. Another thing I would like to say, counsel for complainants asked me if I ever capped cans with the hole or exhaust not in the centre, I told him no; but I have, I think James E. Stansbury's patent does not have the holes in the centre of the caps, the hole was in the cap on the side, and not in the centre of it.

1st Inter. You stated that the pressure of that machine would be even on the machine whilst being worked; by that answer did you assume or not that the hand was resting on the top of the centre iron?

Ans. Yes, I did.

2d Inter. You stated that you abandoned the machine constructed by you in 1863 or 1864, when you found that it would not operate well; state whether or not you subsequently made any improvement upon that old machine; and if so, when?

Ans. I did not make an improvement on the machine until I saw the one come out with a rod to it—it was a lifting rod—it was the first time Mr. Tillery brought an iron to Mr. Mallory's. As soon as I got my eye on the machine, I went to examine it—Mr. Tillery would not let me. It was in 1871 or 1872.

3d Inter. Whose lifting rod was this that you saw?

Ans. I don't know whose it was. I saw it attached to this machine.

4th Inter. If there is a machine in this room with a rod attached like the one you then saw, please exhibit it and state which it is.

Ans. I don't see one.

5th Inter. Did you see before you the Barker & Bostwick, Exhibit J. T. Jones and J. T. Jones No. 2, while making your last answer?

(Objected to because the models of the Barker & Bostwick are sitting on the examiner's table before the witness.)

Ans. They were right in front of me.

181 6th Inter. If you at that time—that is, in 1871 and 1872—made any improvements on the original machine constructed by you, please file with the examiner the drawings of that machine? (Objected to.)

Ans. I herewith file it marked Exhibit, Defendant's Exhibit Burris' improvement.

(Complainants' counsel objects to the interrogatory and the filing of the exhibit, because witness has not been asked to describe his improvement.)

7th Inter. Did you or not make and sell machines constructed like those drawings; and if so, when and to whom did you sell? (Objected to.)

Ans. I did after I saw that rod in the machine that Tillery had. I sold them to Mr. Counselman, Mr. Baker, Mr. Barnes, Mr. Hemmenway, Messrs. Frick & Chase.

Cross-examined by Mr. PRICE:

1st Cross-Interrogatory. If, as you say, you have capped cans with a hole in the——

(The witness says that he desires to speak to the counsel, for the complainants' counsel for respondents directs him not to except the counsel for complainants first gives his question and it is written down.)

Counsel for complainants now asks the question, "If, as you say, you have capped cans with a hole in the cap, but not in the centre thereof, of what use would the vent in the end of the Tillery rod be in capping a can like that?

Ans. It would be of no use.

2d Cross-Inter. You say that after you had seen the rod in the machine that Tillery brought to Mallory you went to work to improve your own machine. Where did you find your old machine?

182 Ans. We did not find the old one.

3d Cross-Inter. Then you did not improve the old machine, but made a new one entirely?

Ans. That is so.

4th Cross-Inter. If you made entirely new machines, and sold them as you say, what is the reason you did not bring one of the machines, instead of the sketch you have filed?

Ans. I did not know you wanted to look at it; I have one in my

shop I have used, in fact it was the first one I made after seeing the lifting rod.

5th Cross-Inter. What is the shape of the iron on the bottom of the machine, as shown in the sketch, Burris' improvement?

Ans. A kind of a half circle.

6th Cross-Inter. Did you see enough of the machine which Tillery brought to Mallory's place to notice the shape of the soldering iron?

Ans. He had no soldering iron in it when I saw it.

Re-direct examination by Mr. BROWN:

1st Re-direct Interrogatory. You say in answer to counsel for complainants, that you did not improve your old irons, but made entirely new ones; the question I wish to ask is, whether or not the new irons you made were an improvement on the plan of the original old iron?

Ans. Yes, and also an improvement on the one Mr. Tillery brought to Mr. Mallory's.

2d Re-direct Inter. Had you communicated to counsel for defendants prior to your last examination the facts to which you have testified this morning?

Ans. No.

Re-cross examination by Mr. PRICE:

1st Re-cross Inter. Were these new irons that you made, after seeing the Tillery rod at Mallory's, so much an improve-
183 ment on your old one, that the old one would not work and the new one would?

Ans. The old one would have worked if it had had a vent.

Witness herewith files three exhibits, marked Defendants' Exhibit Burris' Improvement Models Nos. 1, 2, and 3, and says that No. 1 is the one which he alluded to by sketch "Burris' Improvement," and Nos. 2 and 3 he made some time after he made improvement model No. 1, and a rod marked Burris' Improvement Model No. 4, which is intended to be used with any of the three exhibits just filed. Witness also says that the holes through the handles are intended for the insertion of the rod, and the hole in the cross-bar, in which is inserted a set-screw, is intended for the insertion of the tool or soldering iron.

JAMES H. BURRIS.

Subscribed and sworn to before me, this 27th day of February, 1880.

ISAAC BROOKS, JR., *Examiner.*

William M. Ives.

WILLIAM M. IVES, a witness produced on behalf of the defendants, after being duly sworn, deposes and says as follows:

1st Interrogatory. State your name, age, residence, and occupation.

Answer. My name is William M. Ives. I am sixty-nine years of age. I reside No. 41 N. High street. I am out of business now, but when I was in business I was a machinist.

2d Inter. What kind of machines did you construct when a machinist?

Ans. Steam fire-engines and other light machinery.

3d Inter. What knowledge, if any, have you of drawings and specifications for machinery?

184 Ans. Very little.

4th Inter. Are you or not, from the drawings and specifications of any ordinary machine, able to tell how to construct the machine? (Objected to.)

Ans. I am.

5th Inter. Look at complainants' Exhibit, Barker original patent, and complainants' Exhibit, Bostwick patent, state whether or not you have examined them before; and if so, whether or not you would be able to construct machines from those drawings and specifications? (Objected to.)

Ans. I have examined them; I would be able to construct machines from those drawings and specifications.

6th Inter. If there are any models in the room constructed from those drawings and specifications, please point them out? (Objected to.)

Witness hands the examiner Exhibits J. T. Jones and J. T. Jones, No. 2, and holds up the soldering iron from Exhibit Burris, which was loose, and says that it is the soldering iron belonging to the Ewalt & Tillery iron.

7th Inter. Look now at Ewalt & Tillery model, and state whether or not it is constructed upon the principle embodied in J. T. Jones, and J. T. Jones No. 2, and if not, point out the differences? (Objected to.)

Ans. I think they are different articles entirely, although intended to do the same work. The Ewalt is a success, and J. T. Jones, and J. T. Jones No. 2, are failures; in my opinion you cannot use them practically.

Complainants' counsel does not waive his objection to this witness as an expert, but proceeds to cross-examine him as follows:

Cross-examined by Mr. PRICE:

1st. Cross-Interrogatory. Have you any experience in capping cans?

185 Ans. I have none, although I have seen persons at work capping cans.

2d Cross-Inter. What kind of tools have you seen used in such work?

Ans. The ordinary soldering irons and no other kind; I mean an iron like Exhibit Platt.

3d Cross-Inter. Then you never have seen at work an iron like Ewalt & Tillery model, or like either of the Exhibits J. T. Jones and J. T. Jones No. 2?

Ans. I think not.

4th Cross-Inter. You were asked in the 7th interrogatory-in-chief to look at the Ewalt & Tillery model and state whether or not it is constructed upon the principle embodied in J. T. Jones and J. T. Jones No. 2; will you tell us now what is the principle embodied in J. T. Jones and J. T. Jones No. 2?

Witness asks what do you mean by the principle; counsel for complainants replies that that is for the witness to explain, inasmuch as he has already answered the question-in-chief relating to the principles of these exhibits.

Witness says, I am not an expert in soldering cans; I can give no opinion about that.

5th Cross-Inter. You have stated in your answer to the 5th interrogatory that you had examined the Barker and Bostwick original patents before, and that you would be able to construct machines from those drawings and specifications, and you have also said that Exhibit J. T. Jones and J. T. Jones No. 2 were soldering irons constructed from those drawings and specifications; can you now tell, after I have called your attention to these answers, what is the principle embodied in those two tools?

Ans. I can't answer that question; I don't profess to know anything about them.

WM. M. IVES.

186 Subscribed and sworn to before me this 27th day of February, 1880.

ISAAC BROOKS, Jr., *Examiner.*

Then adjourned.

February 28th, 1880. Commission met, all counsel present.

Complainants' counsel here files letters patent of the United States, No. 115,760, granted to Louis McMurray and Robert I. Hollingsworth for "Improvement in Soldering Tools," dated the 6th day of June, 1871, and marked Complainants' Exhibit, "McMurray Patent." (Objected to, but not on the ground that the patent is an original and not a certified copy.)

N. G. Numsen.

N. G. NUMSEN, a witness produced on behalf of the defendants, after being duly sworn, deposes and says as follows:

1st Interrogatory. State your name, age, residence, and occupation?

Answer. My name is N. G. Numsen. I am fifty-one years of age,

I reside No. 304 Lexington street. I am an oyster and fruit packer. I have been in that business for about twenty-five to twenty-seven years.

2d Inter. Are you or not acquainted with the complainants in this case, or any one of them?

Ans. I am acquainted with Mr. Lang, Mr. McMurray, and am slightly acquainted with Mr. Burnham.

3d Inter. How long have you known Mr. Lang?

187 Ans. I don't know when I first became acquainted with him; probably in 1871 or 1872, perhaps before.

4th Inter. What business was he then in, and what, if anything, did he do for the purpose of inducing your firm to buy goods from him? (Objected to.)

Ans. He was a manufacturer of wire-solder; he took an interest in patent irons, such as would require us to use wire-solder.

5th Inter. Did you or not, at his instance, obtain a patent for an iron with which his solder could be used, and if so, please produce the patent? (Objected to.)

Ans. I can't remember that he suggested to me to get up a patent iron, but at all events, while I was getting up this iron, which I herewith file, marked "Exhibit Numsen"—(the filing of Exhibit Numsen objected to)—he came nearly every day to our factory, went with me to Washington to get the patent, introduced the patent lawyer. I herewith produce the letters patent, and herewith file them, marked Exhibit "Numsen Patent."

(Counsel for complainants does not object to Exhibit Numsen Patent on the ground that it is an original patent, and not a certified one.)

6th Inter. What, if anything, was said to you by Lang about the sale of his solder, at or about the time you were getting up this patent? (Objected to.)

Ans. I can't remember anything upon that point.)

7th Inter. What reason, if any, had Lang for desiring to facilitate you to get up this patent? (Objected to.)

Ans. So as to use his solder.

8th Inter. How do you know that was his object? (Objected to.)

Ans. No other solder could be used but wire-solder.

188 Cross-examined by Mr. PRICE.

1st Cross-Interrogatory. Is "Exhibit Numsen" the model which you filed at the Patent Office when you obtained your patent?

Answer. It is not the identical iron I filed at the Patent Office.

2d Cross-Inter. When was that iron Exhibit Numsen made, and by whom?

Ans. I can't say, as I had several made at different times. It was made by Flynn & Emerich.

3d Cross-Inter. Was it made before your letters patent were granted, or after?

Ans. I can't say that, as I did not keep the original iron.

4th Cross-Inter. Did you, during the time you were getting up that iron, or at any time before that, visit to the packing establishment of Mr. McMurray, and see the iron which he then had in use? (Objected to.)

Ans. Possibly I did.

5th Cross-Inter. Did you instruct Flynn & Emerich, or their foreman, or the workman who was making the iron for you, to construct that iron as nearly as possible to the shape of the McMurray iron?

Ans. No, sir; I did not.

6th Cross-Inter. Look at Exhibit McMurray No. 2, and say, if you had seen an iron similar to that, when you were getting up your own, or at any time before that?

Ans. I had seen McMurray's iron at his establishment long before that, but I don't remember about his iron having a rod in it at this moment; it may have had one. I went there, at Mr. McMurray's invitation, some time before that, I think.

7th Cross-Inter. Are you still in the packing business?

Ans. I am.

8th Cross-Inter. What iron are you using?

Ans. A copper iron, somewhat on the principle of the Tillery iron.

189 9th Cross-Inter. Do you the use solder wire with the Tillery iron or not?

Ans. We use drop solder.

10th Cross-Inter. State if you know, what is the reputation of McMurray & Co., for the manner in which their goods are put up? (Objected to.)

Ans. There reputation is good, I know nothing against them.

11th Cross-Inter. I mean the quality of their goods after they are packed? (Objected to.)

Ans. Their reputation is the same as any good packer.

N. G. NUMSEN.

Subscribed and sworn to before me, this 28th day of February, 1880.

ISAAC BROOKS, Jr., *Examiner.*

John Casey.

JOHN CASEY, a witness produced on behalf of defendants, after being duly sworn, deposes and says, as follows:

1st Interrogatory. State your name, age, residence, and occupation?

Ans. My name is John Casey; I am forty-seven years of age; I reside No. 177 North High street; I am a can manufacturer and oyster packer and processor. Since 1853 I have been engaged for myself or others in packing oysters and fruits.

2d Inter. What knowledge have you, if any, of soldering caps on oyster and fruit cans?

Ans. I have worked at capping cans.

3d Inter. With what kind of tools?

190 Ans. I worked with a straight capping-iron, also with the Tillery iron, and also with the iron I now file, marked Exhibit Casey. (The filing of Exhibit Casey objected to.)

4th Inter. Do you mean you used the exhibit itself, or one made like that?

Complainants' counsel objects to showing the witness any machine at all before he is asked to describe what he did use.

Ans. One made like this.

5th Inter. Who made this exhibit?

Ans. That I don't know.

6th Inter. When and where was it that you used a machine constructed like that exhibit?

Ans. I used it in Alice Anna street, in 1853; I got it up myself, except some little improvements which have been made since; there have been some improvements made on Exhibit Casey since I used it.

7th Inter. How long did you use the machine?

Ans. I have used it, I guess, about two years myself in capping cans.

8th Inter. What other persons used that or a similar iron, if you know? (Objected to.)

Ans. Mr. Francis J. Ruth.

9th Inter. When did he use it? (Objected to.)

Ans. That I could not answer, as I don't know in what year it was.

10th Inter. Was it before or after 1868? (Objected to.)

Ans. It was before 1868.

11th Inter. Describe the machine used by you and how it was operated?

Ans. We put the can right under the lever, which held the cap down, and held it with a handle worked by the foot, and capped with a straight iron, like Exhibit Platt; the cap was flat.

12th Inter. Was there anything between the lever and the cap on that machine, and if so, what?

191 Ans. The rod that held the cap down which turned on a pivot.

13th Inter. Where was that pivot?

Ans. It rested on the cap.

14th Inter. What, if anything, was on the end of the rod next to the cap?

Ans. I call it a piece of sheet-iron, which set on the cap, it had holes punched in it.

15th Inter. What was the object of these holes?

Ans. To let the air from the cans whilst capping.

16th Inter. Was this piece of sheet-iron flat or made with a recess? (Objected to.)

Ans. It was made with a recess.

17th Inter. Did the end of the rod touch upon the cap or not?

Ans. No.

18th Inter. How was the end of the rod attached to this piece of sheet-iron?

Ans. It was connected by a screw.

19th Inter. State whether or not the rod was attached tightly to this piece of sheet-iron, or whether the sheet-iron revolved around it?

Ans. The sheet-iron revolved around it.

20th Inter. How was the rod attached to the lever at the top?

Ans. With a nut and bolt set in on a slot and bolted there.

21st Inter. What, if anything, supported the other end of the lever?

Ans. An iron that came up from the bench with a spring attached.

22d Inter. In what way was the force obtained on this rod to make it hold the cap?

Ans. By a treadle attached to the floor.

Then adjourned to March 1st, 1880.

192 March 1st, 1880. Commission met, counsel present. The examination of the witness was then resumed.

23d Inter. What shape of soldering irons have you seen in use, and where and at what time were these different shaped irons used?

Ans. I have seen irons used similar in shape to the copper iron in Exhibit Ewalt & Tillery model for floating solder. I saw this soldering iron, I mean the shape of a segment of a circle saw in 1845. I don't mean the machine Ewalt & Tillery model, but the copper soldering iron attached thereto: I saw it in Ireland; I have seen it in Baltimore in the year I think in about 1863 or 1864, at the shop of Thomas Kensett & Co.

24th Int. Look at Exhibit J. T. Jones No. 2, and state whether or not it can be practically used for capping cans; and if not, why not? (Objected to.)

Ans. No, sir; my reasons are that it won't revolve, and from the appearance of the iron it won't set in the crease, that is all that I see.

25th Inter. Could you or not heat that iron without at the same time heating the movable rod?

Ans. The road would heat too with the iron.

26th Inter. What effect, if any, would that movable rod if heated have upon the cap?

Ans. It would draw the cap out of its place.

27th Inter. When the circular iron should be heated, would or not the heat extend up both iron rods.

Ans. Yes.

28th Inter. If the iron rods become heated, could a capper handle the rods?

Ans. They would be too hot.

(Witness asks if there is a wooden handle put to this iron. Counsel for the defendants replies that he is asking about Exhibit J. T. Jones No. 2, just as it is.)

193 29th Inter. You will observe that the recess at the bottom of this circular iron is just deep enough not to rest upon the cap; when the surface of that recess becomes heated, what effect, if any, would it have on the cap?

Ans. It would burn the cap and not touch the solder—that is, if it was a flat cap it would melt the solder, but if a creased cap it would not melt the solder.

30th Inter. The question I asked is not concerning the circular surface, which is intended to rest upon the crease, but the circular inner surface which is over the top of the body of the cap; if that inner surface is heated, what effect, if any, will it have upon the body of the cap?

Ans. It would have none.

31st Inter. Would or not the heat from that inner surface, being so near the cap, burn or deface it?

Ans. That would not burn the cap.

32d Inter. Look at Exhibit J. T. Jones, and state whether or not that iron could be practically used for capping cans, and if not, why?

Ans. In the heating of the iron it would get so hot on the handle that a man could not hold it to work it. (The witness in his answer takes hold of the centre-weight in Exhibit J. T. Jones at the top.) The centre-rod setting on the cap, the air has not got vent to escape, and in moving and working the iron it would cause the solder to have a tendency to blow.

33d Inter. Could you or not use this iron at all without holding he centre-weight with one hand?

Ans. Of course I could not; I have to hold my hand on it to keep tthe cap down.

34th Inter. If the soldering-iron proper is heated, and then put over the centre weight or rod, would or would not the heat from the iron tend to heat the centre-rod?

Ans. No; it would not heat this centre weight or rod.

35th Inter. Suppose it were kept on there until six or eight cans were capped, would or would not that cetre-rod by that time become more or less heated?

Ans. Yes; it would become more or less heated then.

194 36th Inter. In putting this heated iron over the top of that centre iron, would not the top of the centre iron become somewhat heated?

Ans. I have already answered that question, have I not?

(The counsel for defendants explain that the other question related to the whole rod and this relates to the top.)

Ans. It would.

Cross-examined by Mr. PRICE:

1st Cross-Interrogatory. In your answer to the 29th Inter., in reference to J. T. Jones No. 2, you stated that if it were a flat cap that iron would melt the solder, but if it were a creased cap it would not. Suppose that iron were made with the recess in the under side so as to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover, would it answer the purpose then? (Objected to.)

Ans. No, sir.

2d Cross-Inter. Why not?

Ans. This iron cannot revolve round.

3d Cross-Inter. My question relates to the fact if the iron would melt the solder in a creased cap?

Ans. Yes, it would then melt the solder in a creased cap.

4th Cross-Inter. In your answer to the 28th interrogatory you have stated that a capper could not handle the rods, they would be too hot; you then ask the question yourself, "If there is a wooden handle put on this iron?" to which counsel for defendants replies, "That he asks you the question about Exhibit J. T. Jones No. 2 just as it is." I now ask you to look at the iron now filed, marked complainants' Exhibit "Barker Wooden Handles," and say if a workman could handle that iron without burning his hands? (Objected to.)

Ans. Yes, a man could work that without burning his hands.

195 5th Cross-Inter. In speaking of the Exhibit J. T. Jones No. 2, you spoke about the effect of that iron upon different kind of caps, you also spoke of the absence of a vent; suppose the vent in a can were placed in the head of a can, and not in the cap at all, what necessity would there be for a vent in the tool?

Ans. There would be none.

6th Cross-Inter. Suppose there was no vent in either the cap or the head of the can, could a can be capped with any iron?

Ans. Not practically.

7th Cross-Inter. How do you cap raw oysters, is there any vent in either the can or cap?

Ans. They are all capped without vents.

8th Cross-Inter. Then why did you say you could not practically cap a can with any kind of a tool unless it had a vent somewhere?

A. I had reference to hermetically sealed goods.

9th Cross-Inter. What do you mean by hermetically sealed goods?

Ans. Goods that are processed.

10th Cross-Inter. What has processing to do with capping cans?

Ans. The vent has got to be in the cap or somewhere in the head of the can to give it vent while capping.

11th Cross-Inter. Well, you have said all that before, but what has the processing to do with that?

Ans. Processing has nothing to do wit it.

12th Cross-Inter. Then why do cans which have to be processed require a vent in them any more than cans which do not have to be processed?

Ans. There is hot liquor used in a can of processed goods, and that requires a hole somewhere in the can to keep the solder from blowing.

13th Cross-Inter. Have you not seen peaches and other goods canned and capped, which contained nothing but cold water upon the fruit?

196 Ans. I have.

14th Cross-Inter. Does the can containing that kind of goods require a vent?

Ans. It does.

15th Cross-Inter. Why, if there is no hot liquor in them?

Ans. The heat from the soldering-iron is so great it causes heat around the cap, and causes the liquor to get hot inside.

16th Cross-Inter. Why don't it have this effect upon raw oysters; are not raw oyster cans filled up with water, oysters, and cold water or salt water?

Ans. They don't fill a can over half full of oysters, and the balance is water; they then pour out nearly an inch of water, and the iron don't make any heat then.

17th Cross-Inter. Suppose I were capping hot oysters, and fill the can while the oysters were hot, and waited till they became cool before capping, what necessity would there be for a vent in the can then?

Ans. Those oysters would require a hole in the can somewhere, because these are filled more than the raw oyster cans.

18th Cross-Inter. Suppose I should pour a little of the liquor out, would it require a vent then?

Ans. It depends upon what amount of liquor was poured out.

19th Cross-Inter. Now, tell me exactly how far the liquor could come from the top of the can without requiring a vent?

Ans. About half an inch from the top of the crease.

20th Cross-Inter. Would not a quarter of an inch do?

Ans. I guess they could be capped in a quarter of an inch.

21st Cross-Inter. Would not an eighth of an inch do?

Ans. No, sir.

22d Cross-Inter. Why not?

Ans. Because the heat from the soldering-iron would cause the solder to blow.

23d Cross-Inter. Now, look at the cans and caps which I

197 now show you, and say if you have seen used in the trade cans and caps like these; they are herewith filed, marked "Complainants' Exhibit Raw Oyster Can"?

Ans. Yes, sir; I have seen such cans.

24th Cross-Inter. Are such cans and caps in general use in the trade?

Ans. Not many of those cans.

25th Cross-Inter. Are such caps in general use?

Ans. Yes, sir; they are.

26th Cross-Inter. You will observe that none of those caps have a vent, but some of them have a puncture or indentation, which does not go through the tin, about the centre of the cap; what is that little puncture for?

Ans. To steady the soldering iron.

27th Cross-Inter. What kind of a soldering iron?

Ans. (The witness picks up the Ewalt & Tillery model and says:) This kind.

28th Cross-Inter. Now you will observe that some of these caps have no indentation in them, they are perfectly plain; are such caps intended to be soldered by using the Ewalt & Tillery iron?

Ans. No, sir.

28¼th Cross-Inter. Then I understand you, that to use the Ewalt & Tillery iron at all a cap must be made to suit it, either with a hole through the centre or an indentation in the centre of said cap?

Ans. Yes, there has got to be a hole or indentation in the cap.

28½th Cross-Inter. In using a circular soldering iron, except for the purposes of venting, as you have said, there is no necessity for either a hole or an indentation in the cap; is that so?

Ans. There would not be any necessity for a hole or indentation in caps or cans like "Raw Oyster Cans;" there would be none in any can in using irons like Exhibit J. T. Jones and J. T. Jones No. 2, except for venting.

29th Cross-Inter. Now look at J. T. Jones No. 2 and state
198 whether the hole through which the movable rod passes is not sufficient to allow the escape of steam which may pass through the vent of the cap?

Ans. Yes.

30th Cross-Inter. You say you don't know who made Exhibit "Casey;" do you know when it was made?

Ans. I do not know what time this one was made.

31st Cross-Inter. What do you mean by this one?

Ans. This one was gotten up by some other parties, I did not get it up.

32d Cross-Inter. When and where did you first see this one Exhibit "Casey?"

Ans. At Mr. Mallory's, about two or three weeks ago.

33d Cross-Inter. Who was there at the time?

Ans. Several gentlemen—Mr. Kegan, Mr. Mallory, and some of the clerks.

34th Cross-Inter. Did you have any conversation about it with Mr. Kegan and Mr. Mallory?

Ans. Yes, sir; in the presence of Mr. Mallory.

35th Cross-Inter. Were you asked to look at that machine?

Ans. Yes.

36th Cross-Inter. What were you asked to state in reference to it?

Ans. My attention was called to it, and I was asked if I knew the

machine, I told them it was my getting up; that was all that passed at that time.

Complainants' counsel does not waive any objection he may have made to the filing of Exhibit "Casey," or to the examination of this witness, but proposes to cross-examine as follows:

37th Cross-Inter. You say in relation to the old machine, which you got up in 1853, you put the can under the lever, which was held down by a treadle with the foot, and capped with a straight iron like Exhibit Platt; explain the position of your hands in capping with that machine?

Ans. We held the cap down with the treadle, and we took the soldering iron in the right hand, took up the solder from the
199 cake of metal, and placed it on the cap by turning the can around with the left hand on a disk.

38th Cross-Inter. Then I understand you to say that the can was held in the left hand, and the can rotated or turned by the left hand, at the same time rubbing the soldering iron upon the edge of the cap with the right hand, is this correct?

Ans. Yes.

39th Cross-Inter. Look at the can now shown you with a flat cap on top of it, and state whether that was the kind of a can and cap upon which you did your work at that time. It is herewith filed, marked Complainants' Exhibit "Casey Can?"

Ans. The opening in the can and the flat cap are the same.

40th Cross-Inter. What was the process before you used this machine for soldering cans with flat caps?

Ans. (Witness takes the soldering iron Exhibit Platt in his right hand, holds the can with his left hand, with the finger next to the thumb placed on the cap,) and says: We had a thumb stall on the finger which was placed on the cap, the thumb stall was made out of wood, we took the metal from the cake, and rubbed it with the soldering iron around the edge of the cap, rotating the can with our left hand.

41st Cross-Inter. You rotated the can with your left hand precisely as you did afterwards when you used the machine, did you not?

Ans. I did.

42d. Cross-Inter. What improvement was the machine which you used upon the old process which you just described, so far as regards the amount of work or the number of cans which you capped?

Ans. We capped a great many more cans with the improvement.

43d Cross-Inter. Where is the machine you used in 1853?

Ans. I left it on Alice Anna street, at Reeves & Brennan.

44th Cross-Inter. Who was working with you on this old machine?

200 Ans. John McCarty; he is now dead. Mr. Kegan worked in the factory too when I worked there.

45th Cross-Inter. Who is Mr. Kegan?

Ans. Mr. Kegan is an oyster and fruit processor at Messrs. D. D. Mallory & Co.'s

46th Cross-Inter. When did you last see this old machine?

Ans. About the year 1857.

47th Cross-Inter. Do you know what became of it?

Ans. No, sir.

48th Cross-Inter. Have you ever seen it or one like it since?

Ans. I have never seen it, nor any like it, until I saw Exhibit Casey.

49th Cross-Inter. State, if you know, what is the reputation of Mr. McMurray's canned goods?

Ans. I never heard anything wrong about Mr. McMurray's goods; they have a big reputation all over this country.

Re-direct by Mr. BROWN:

1st Re-direct Interrogatory. For what kind of oysters are these square oyster cans marked "Raw Oyster Cans" used?

Answer. For raw oysters.

2d Re-direct Inter. These cans are nearly square on the top, and the opening is some distance from the shoulder of the can; what is the shape of the so-called square cans used for hermetically sealed oysters?

Ans. There are no square cans used for hermetically sealed oysters in Baltimore that I know of.

3d Re-direct Inter. Are Exhibits "Raw Oyster Cans" the ordinary shape used for raw oysters?

Ans. No; the difference is, some cans are made for raw oysters two inches wide by four on top.

4th Re-direct Inter. You say "Some are made;" what proportion of the so-called square cans are so made? (Objected to.)

201 Ans. There are a great many more of the half cans made than whole cans. I could not tell the proportion. Exhibits "Raw Oyster Cans" are whole cans, and those 2 by 4 inches are half cans. There are more of this latter made than the former.

5th Re-direct Inter. How near to the shoulder of the half can does the opening in the top come?

Ans. About a quarter of an inch. (Witness says this after measuring the cap with a rule.)

6th Re-direct Inter. What effect, if any, would be produced on steamed oysters, if, after being processed, they are allowed to cool before they are capped? (Objected to, as not being responsive to anything brought out on cross-examination.)

Ans. I don't know of any.

7th Re-direct Inter. When are the oysters processed—before or after being capped?

Ans. After they are capped.

8th Re-direct Inter. Please explain how steamed oysters are prepared before the cap is put on?

Ans. They go into a steam-box, and they are steamed; then they

are shucked; they are placed on a table, placed in the cans, hot liquor put over them, then capped.

9th Re-direct Inter. Why do you put hot liquor over them?

Ans. To save the time of exhausting them.

10th Re-direct Inter. Suppose that hot liquor is allowed to cool before the cap is put on, what effect will be produced upon the quality of the oysters?

Ans. Then the oysters would have to be tipped—what we call venting or exhausting.

Re-cross examination by Mr. PRICE:

1st Re-cross Interrogatory. In olden times, have you never seen these oysters on the table allowed to cool entirely before they were put into cans?

202 Yes.

2d Re-cross Inter. Were they not afterwards capped up?

Ans. Yes.

3d Re-cross Inter. Counsel for defendants have asked a question—sixth re-direct interrogatory—about the effect on steamed oysters, if after being processed they are allowed to cool before being capped is it possible to process oysters at all before being capped?

Ans. It is impossible.

JOHN CASEY.

Subscribed and sworn to before me, this 1st day of March, 1880.

ISAAC BROOKS, JR., *Examiner.*

Then adjourned.

March 14th, 1880, Commissson met, all counsel present.

Francis J. Ruth.

FRANCIS J. RUTH, a witness produced on behalf of the defendants, after being duly sworn, deposes and says, as follows:

1st Interrogatory. State your name, age, residence, and occupation?

Answer. My name is Francis J. Ruth; I am forty-nine years of age; I reside No. 489 E. Baltimore street; I am an oyster and fruit packer.

2d Inter. State what knowledge you have, if any, of capping oyster and fruit cans, and how obtained?

Ans. I am a practical tinner, having served a regular ap-

203 prenticeship at it, and commenced capping cans in my eighteenth year, I capped for four straight years, and have capped more or less up to this date, with the different methods that from time to time were introduced. When I commenced capping I introduced some little improvements myself. I have improved a number of machines, some of them were other people's ideas, which I improved on, and some I made myself.

3d Inter. Has or not your experience been with reference to capped hermetically sealed goods?

Ans. It has been.

4th Inter. Please state what kind of irons you have used?

Ans. I have used a straight iron principally until those irons—the Tillery patent—came into use.

5th Inter. Please look at Exhibit J. T. Jones No. 2 and state whether or not, in your opinion, that iron can be practically used for the capping of cans; and if not, state your reasons for such an opinion? (Objected to.)

Ans. It could not be used as a capping iron in my opinion, because it cannot be revolved.

6th Inter. What would be the effect of revolving that iron upon the cap? (Objected to.)

Ans. It would disturb the cap, the removable rod not being in the centre.

7th Inter. Please look at the soldering edge of this iron and state whether or not such an edge will solder a cap with a crease? (Objected to.)

Ans. I think it entirely impractical.

8th Inter. Please explain why. (Objected to.)

Ans. Because the edges of this iron are square; they should be V-shaped, without regard to the material the iron may be made of.

9th Inter. What, if any, objection would there be to the material the exhibit is made of?

Ans. It is not made of material that is calculated to do soldering; this is cast iron, I judge; pure copper is the best material.

10th Inter. State the reason why pure copper is the best?

204 Ans. The solder is more adhesive to copper; it also retains the heat better than any other material.

11th Inter. What would be the effect of heating this soldering-iron upon the movable rod and the handle? (Objected to.)

Ans. The handle would become heated, so that you could not hold it, and the iron itself would not hold the tinning, because the tool is made of iron.

12th Inter. In capping oysters and fruit cans, is there or not always a vent-hole in the can?

Ans. No, sir; but there is in the cap.

13th Inter. What is the use of this vent?

Ans. It is to obviate the vacuum in the can, caused by the heat in soldering. If there was no vent, the vacuum would draw the solder inside the can.

14th Inter. State how the solder would be drawn in if there were no vent?

Ans. By creating this vacuum it would naturally draw in the outer air, and fill itself up—I mean, would fill up the can.

15th Inter. Can or not a can be soldered air-tight without a vent?

Ans. Yes, sir, but with difficulty.

3d Cross-Inter. Are you acquainted with the reputation of the house of McMurray & Co. for canned goods; if yea, what is their reputation?

Ans. I am. A No. 1.

4th Cross-Inter. Are you aware that for years all the goods of that house have been in cans capped with circular irons, or with capping irons, made in the shape of an entire circle?

Ans. I am not.

5th Cross-Inter. Do you know a good piece of soldering when you see it?

Ans. I do.

6th Cross-Inter. Look at the cans marked J. D. W., and say whether that is good work?

Ans. I would call it fair work.

7th Cross-Inter. Suppose you were told that those cans were all capped with a circular soldering iron in the hands of a man who had never capped a can before in his life, or used a soldering iron of any kind, what would you think of the work? (Objected to.)

Ans. I would consider it good work.

298 8th Cross-Inter. You have spoken of Exhibit J. T. Jones No. 2, and have said in answer to the 7th and 8th interrogatory-in-chief that you did not think that iron practical, because the edges were square, and they should be V-shaped; suppose that iron was constructed so that that recess in the under side should be made so as to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover, would that be a proper shape for soldering the cap on the can?

Ans. I could not answer that question.

9th Cross-Inter. What was the old mode of putting the vent in the cans?

Ans. With a sharp prick punch.

10th Cross-Inter. Whereabouts on the can were they put?

Ans. As near the centre of the cap as they could strike.

11th Cross-Inter. How was this prick punch used?

Ans. With a hammer or mallet striking it.

12th Cross-Inter. Have you never seen it done by a workman holding the punch in one hand and striking the head of the punch with the ball of the other hand?

Ans. I have.

13th Cross-Inter. When it was done so were the vents always in the centre of the cap; and if not, where were they?

Ans. They were as near the centre as they could strike off-hand.

14th Cross-Inter. How near the centre do you suppose a workman would strike off-handed in this way whilst rapidly venting—say a dozen or two dozen of cans?

Ans. Within an eighth of an inch of the centre.

15th Cross-Inter. With that hole an eighth of an inch from the centre, of what use would be the vent hole in the end of the Ewalt & Tillery rod in capping a can?

Ans. It would not be any use.

16th Cross-Inter. What difference does it make in the practical venting of cans, where the vent hole is placed, provided it be anywhere in the cap or head of the can?

209 None.

17th Cross-Inter. Suppose the iron in Exhibit J. T. Jones No. 2, were made of copper, would it then hold the tinning?

A. It would.

18th Cross-Inter. You speak of a vacuum created in the can in the process of soldering the caps on them, which vacuum you said would draw the solder in, unless it had a vent; state what causes this vacuum, and the reason why the solder would thus be drawn into the can?

Ans. The heat caused by the soldering process, and the sudden chilling of the can, would naturally make the solder draw in.

19th Cross-Inter. How is the can suddenly chilled?

Ans. The outer atmosphere.

20th Cross-Inter. Does the outer atmosphere chill the can so suddenly that it does not give the solder time to set or harden?

Ans. Yes.

21st Cross-Inter. Now, which is it that forms the vacuum in the can, which draws the solder in, the sudden chilling of the can by the atmosphere, or the heating of it by the iron?

Ans. The heating process expands the air, and the sudden chilling forms the partial vacuum.

22d Cross-Inter. Are you aware that all the mechanics who have been brought on the stand to testify for the defendants in this case, except yourself, have declared that the use of a vent in the can was to let the steam or hot air escape out of the can, and prevent it blowing the solder out, instead of drawing it in. (Objected to.)

Ans. I am not.

23d Cross-Inter. Do you agree with the theory of blowing the solder out instead of drawing the solder in?

Ans. I do in some instances.

24th Cross-Inter. In what instances?

Ans. When a can is heated hotter than it should be.

25th Cross-Inter. Suppose it is just heated properly?

Ans. It is not apt to do it.

210 26th Cross-Inter. To do what?

Ans. So blow out.

27th Cross-Inter. Would it be apt to draw the solder in?

Ans. Yes.

28th Cross-Inter. You have been asked in your examination-in-chief to give your reasons why a soldering iron of the shape of a segment of a circle is better than one in the shape of an entire circle, and have given as one reason, that soldering requires friction, in order to get the metal in its proper place, state why you could not get friction with a circular iron?

Ans. I did not say you could not get friction.

29th Cross-Inter. Look at the iron now shown you, marked Exhibit McMurray No. 1, and state if you could not get as much friction with that iron as you could with one in the shape of a segment of a circle?

Ans. You could, but you could not see the process until it was finished.

30th Cross-Inter. Could you not lift it up occasionally and look at it?

Ans. It would be an impracticable move to do so.

31st Cross-Inter. State why?

Ans. It would displace the cap, or would be apt to do so.

32d Cross-Inter. Suppose one of the little weights, now shown you, was placed upon the cap, would it tend to displace the cap then, in lifting the iron up to look at your work?

Ans. Yes, I should think so.

33d Cross-Inter. Are you aware that millions of cans have been capped with irons and weights like McMurray No. 1? (Objected to.)

Ans. I am not.

34th Cross-Inter. You have said that an iron shaped like J. T. Jones' was not practical; you have also stated that the rod in that Exhibit could be held in place only by its own weight; is not the weight of that rod sufficient to hold the cap in place?

211 Ans. It is, if vented elsewhere than under the rod.

35th Cross-Inter. Look at the iron now shown you marked Defendants' Exhibit McMurray No. 2, and state if you have ever seen an iron like that?

Ans. I have not.

36th Cross-Inter. Do you think that iron is practical?

Ans. I do.

37th Cross-Inter. Could you get as much friction with that iron as you could with an irom made in the shape of a segment of a circle?

Ans. Yes.

38th Cross-Inter. Would it retain the heat as long?

Ans. Not as long as if it were copper.

39th Cross-Inter. Look at the iron now shown you marked "Barker Handle;" could you get as much friction with that iron as you could with a segment of a circle?

Ans. No, sir; the rod is a preventative.

40th Cross-Int. Could you not get all the friction you wanted in soldering a can?

Ans. I am not prepared to say that.

41st Cross-Inter. Is the hole around the movable rod in that iron sufficient to vent it?

Ans. It is.

42d Cross-Inter. Could you use that iron without burning your fingers?

Ans. Yes.

FRANCIS J. RUTH.

Subscribed and sworn to before me, this 11th day of March, 1880.

ISAAC BROOKS, JR., *Examiner.*

It is agreed that Alfred S. Day, Charles E. Hall, Calvin Weinbrenner, Samuel King, William Faust, and William Steiner, may be examined on behalf of defendant as soon as prior use, &c.,
212 as fully as if notice had been given, as provided in Sec. 4920 of the Revised Statutes of the United States, and complainants may have opportunity to see the witnesses before cross-examination, and after cross-examination, if necessary, and may have all other rights of objection to the matter testified upon, except the want of notice.

Samuel King.

SAMUEL KING, a witness produced on behalf of the defendants, after being duly sworn, deposes and says, as follows:

1st Interrogatory. State your name, age, residence, and occupation?

Answer. My name is Samuel King. I am thirty-four years of age. I live 455 E. Chase street. I am a can maker and capper.

2d Inter. How long have you been a capper and can maker?

Ans. I have been a can maker since 1869; I have been a can capper since 1864.

3d Inter. Where, and how are you now employed?

Ans. I am employed by Evans, Day & Co., making cans.

4th Inter. When and where did you see the first tool or machine (other than the old straight iron) for capping cans?

Ans. I saw the first machine at J. G. Kraft & Co's in the latter part of 1869, or very early in 1870.

5th Inter. How do you fix the date?

Ans. I was not married when I first saw the patent iron; I was married on the 21st day of August, 1870.

6th Inter. How long before you were married was it before you saw this iron?

Ans. In the winter, about Christmas, before I was married, when they were getting this iron up.

7th Inter. Who got the iron up?

213 Ans. Calvin Weinbrenner.

8th Inter. Describe that iron as near as you can?

Ans. The iron worked with a rod through a flat piece of iron, forming an off-set I should call it, on each end,—then the rod worked down through the two holes that were in this flat piece of iron, and through a cog-wheel, then there was a cog-wheel attached to that wheel, with a handle, with which you turned the iron.

9th Inter. To what was the soldering iron attached?

Ans. A little piece came off with a set screw, connected with the cog-wheel, in order to turn the iron.

10th Inter. What purpose did the rod serve?

Ans. For holding down the cap.

11th Inter. State whether or not the soldering iron revolved around this rod?

Ans. It did.

12th Inter. If there is any tool in the room made like the tool you have described, please produce it? (Objected to.)

Ans. This is like it; I herewith file it, marked defendants' Exhibit, "Weinbrenner."

13th Inter. State whether or not the machine you have described was used, if so, when and where? (Objected to.)

Ans. It was tried and used at J. G. Kraft & Co.'s, just after it was finished, in the winter before my marriage.

14th Inter. Who saw it used beside yourself?

Ans. Mr. Steiner helped to make it work.

15th Inter. How long was it used?

Ans. That I am unable to say exactly.

16th Inter. If its use was not continued, why was it not?

Ans. Because at that time, no one who was a capper took a fancy to a machine; there was a prejudice against the machine by the regular cappers.

17th Inter. State whether or not in your judgment, this machine could have been practically used, but for the prejudice against it?

Ans. I am satisfied that it could.

214 Cross-examined by Mr. PRICE:

1st Cross-Interrogatory. When did you first see Exhibit Weinbrenner?

Ans. Last Monday.

2d Cross-Inter. Who made it?

Ans. I can't say.

3d Cross-Inter. Under whose direction was it made?

Ans. I gave the parties ideas about the machine that was used at the time I was speaking of.

4th Cross-Inter. What parties did you give those ideas to?

Ans. Mr. Barney Kegan.

5th Cross-Inter. Who is Mr. Barney Kegan, and by whom is he employed?

Ans. He is sitting in this room; he is employed by D. D. Mallory & Co.

6th Cross-Inter. Did you give any instructions to the mechanic who made it, or only to Mr. Kegan?

Ans. Only to Mr. Kegan.

7th Cross-Inter. Who else were with Mr. Kegan to whom you gave the instructions?

Ans. Nobody but Mr. Kegan and myself.

8th Cross-Inter. Did you make any drawing or sketch of it, and, if yea, to whom did you give it?

Ans. I did not.

9th Cross-Inter. When you first saw Exhibit Weinbrenner, was it completed?

Ans. It was completed when I saw it.

10th Cross-Inter. In whose hands was it the first time you saw it, after it was completed?

Ans. In Mr. Kegan's.

11th Cross-Inter. You say in answer to the 14th Interrogatory-in-chief, that Mr. Steiner helped to used the machine, and helped to make it work, what was the difficulty about making it work which required Mr. Steiner's help?

Ans. The difficulty was in the iron.

215 (The witness points to the soldering iron of Exhibit Weinbrenner.)

12th Cross-Inter. What was the difficulty about the soldering iron?

Ans. When we first put the soldering iron in the machine, it was very sharp, the same as our tipping irons; then Mr. Steiner forged it more "flatter and broader" in order to make it work.

13th Cross-Inter. Then, when Mr. Steiner put his improvement on it, the soldering iron at the end was flat and broad; is this correct?

Ans. It was flat enough to be used: it was not real sharp flat.

14th Cross-Inter. What other objection was there to the iron, which required Mr. Steiner's help to make it work?

Ans. I don't know whether there was any or not.

15th Cross-Inter. Who requested Mr. Steiner's help to make it work?

Ans. Cal. Weinbrenner.

16th Cross-Inter. When was it—give as near the date as you possibly can—that Mr. Steiner rendered his assistance in helping to make this iron work?

Ans. Somewheres along the holidays, in the winter of 1869 and '70—in the latter part of 1869 or early in 1870.

17th Cross-Inter. Then, before Mr. Steiner rendered his assistance in helping to make this iron work, I understand you, that it was not practical, but required his assistance to make it so, is that true?

Ans. It is not true, because the iron that was in it was a tipping iron, forged very sharp to a point; the tipping iron would not work so well as when forged broader.

18th Cross-Inter. You were asked in the 15th interrogatory-in-chief how long that apparatus was used; you answered that you were unable to say exactly; can you say approximately?

Ans. I don't exactly know how long it was used.

216 19th Cross-Inter. You have spoken in your testimony-in-chie of this iron, as being patented; who patented it? (Objected to.)

Ans. If I said it was patented I don't recollect it, in fact I don't think it ever was patented.

20th Cross-Inter. When was the last time you last saw that old iron?

Ans. Not since the fall of 1871—I can't say when I last saw it, as I have not been at work at Kraft's since the fall of 1871.

21st Cross-Inter. What became of that iron?

Ans. I don't know.

22d Cross-Inter. What has been your business since the fall of 1871?

Ans. Can making and capping.

23d Cross-Inter. Where have you been at work since that time?

Ans. In Baltimore, and out of the city too.

24th Cross-Inter. Have you ever seen that iron since then in use at any of the shops?

Ans. No, sir.

SAMUEL KING.

Subscribed and sworn to before me, this 11th day of March, 1880.

ISAAC BROOKS, JR., *Examiner.*

All the testimony of the above witness in relation to Exhibit Weinbrenner objected to by counsel for complainants.

217 *William Steiner.*

WILLIAM STEINER, a witness produced on behalf of the defendants, after being duly sworn, deposes and says, as follows:

1st Interrogatory. State your name, age, residence, and occupation.

Answer. My name is William Steiner; I am forty-five years of age; I reside at No. 307 Light street; I am a capper.

2d Inter. Where are you now employed?

Ans. At Numsen & Sons.

3d Inter. Are you or not acquainted with machines or tools for capping cans?

Ans. Partly so.

4th Inter. State when and where you saw the first machine, other than the old straight iron, for capping cans.

Ans. At J. G. Kraft & Co.'s, in 1870, about January or February.

5th Inter. How do you know it was in January or February?

Ans. We were sent the latter part of December or the first part of January to Mr. Creamer's can shop; we were there a short time making cans, and we were called back then to cap oysters at Mr. Kraft's—that was in 1870; then we did nothing for a short time; in between that time Cal. Weinbrenner brought the machine for trial; he gave it to me to try; we tried to heat the copper over a gas jet; I told him it would not work; going out of the room I said, I will make it work if you will give me a part interest, and he

told me he did not know about that: that is the last I remember of having the machine in my hands.

6th Inter. Had you or not, as a capper, a prejudice against that or any other machine for capping? (Objected to.)

Ans. I must say I partly had.

218 7th Inter. State whether or not in your judgment, but for the prejudice you had against the machine, it could have been practically used? (Objected to.)

Ans. Self interest—whatever was against the interest of the men was against my own interest; in my opinion it could have been practically used by a little working to get my hand in.

8th Inter. Please describe as near as you can that machine? (Objected to.)

Ans. It was something in the shape of what you would call a breast drill or hand drill; it worked with a rod; I am not positive whether that rod went all the way through the handle or not; the copper soldering iron revolved around the rod.

9th Inter. What purpose did the rod serve?

Ans. To hold down the cap.

10th Inter. How was the soldering iron kept in position?

Ans. By a piece that came down from the cog, or rather it was attached to the cog, and a thumb screw went into the socket to fasten the iron to prevent it from falling out.

11th Inter. Suppose the rod were placed on the centre of the cap in revolving the iron around the cap, was or not the iron kept in position by its connection with the rod? (Objected to.)

Ans. It was kept in its position.

12th Inter. If there is in the room a machine or tool constructed anything like the machine you have described, please produce it?

Ans. Exhibit Weinbrenner is as near to it as it can be, but I won't positively say whether this is the same pattern, but it worked on the same principle; I mean those cogs and the rod also; the copper was forged very sharp—what we call a tipping iron.

13th Inter. State whether or not the soldering iron in the machine which you have described revolved around the centre rod on the same principle as the iron in this exhibit revolves?

219 Ans. It did revolve on the same principle.

Cross-examined by Mr. PRICE:

1st Cross-Interrogatory. You state in answer to the 9th interrogatory-in-chief that you were not positive whether the rod went all the way through the handle or not, and in your answer to the last interrogatory-in-chief, you state that the Weinbrenner machine, that you saw in 1870, revolved about the rod, on the same principle as that shown in Exhibit Weinbrenner. How do you explain your answer to the last interrogatory-in-chief, if you are not positive whether the rod went all the way through the handle or not?

Ans. The way I explain that is, if the rod did not go all the way

through the handle, it would begin about an inch from the top or where the wrought iron piece which holds the cog wheels makes its upper bend at the top, and would extend from there down to the can, with a nut on the inside of the pipe to keep the rod from pulling out.

2d Cross-Inter. You were not positive then that the machine of Weinbrenner's, which you saw in 1870, was made in that way, or whether the rod ran all the way through the handle, as shown in this exhibit?

Ans. I am not positive about that, I am positive about the cogs.

3d Cross-Int. If a nut were placed on the inside to keep that rod from pulling out, please state where that nut would be placed?

Ans. It would have to be placed down here on the end of the pipe. (Witness points to the socket on the end of the arm and adjoining and beneath the lower cog-wheel.) I can't give any idea positively how the rod was fixed, it is so long since I have seen the machine.

4th Cross-Int. How long has it been since you did see that machine?

Ans. Near about ten years since I had it in my hand.

220 5th Cross-Inter. You stated in answer to your 5th interrogatory-in-chief, that the last time you had that rod in your hand was about January or February, 1870. Are you sure that it was not March or April, 1870?

Ans. I am not sure—it might have been earlier or it might have been later. It might have been in April, or it might have been before that, but I think that it was earlier than May.

6th Cross-Inter. What were the circumstances under which Calvin Weinbrenner showed you this machine?

Ans. Only that he wanted me to try it and see how it would work.

7th Cross-Inter. Why did you try to heat the copper over a gas jet, why did you not heat it over the ordinary fire for heating soldering irons?

Ans. Because he lit the gas himself and started to heat it in that way.

8th Cross-Inter. Who was with you at that time?

Ans. No one but Mr. Weinbrenner, he called me in and shut the door.

9th Cross-Inter. Why did he shut the door?

Ans. He did not wish any of the rest of them to see it, I believe.

10th Cross-Inter. Why did he not wish the rest of them to see it?

Ans. I can't answer that. Because he wanted to get a patent on it, I suppose; I don't know.

11th Cross-Inter. Why did you tell him it would not work?

Ans. It was self-interest, as I said before.

12th Cross-Inter. You told him that it would not work, whilst you believed that it would work, as a mere matter of self-interest?

Ans. Self-interest and the interest of the men, and for another

reason, which I did not state before, on account of the way the iron was forged.

221 13th Cross-Inter. In going out of the room you told him that you could make it work if he would give you a part interest in it. What did you mean by that?

Ans. If he would pay me for my ideas on it and give me part of the patent, I would try to make it work then; that was what I meant by self-interest.

14th Cross-Inter. Did you believe that iron could work without your ideas, for which you wanted him to pay you?

Ans. I believe it could have.

15th Cross-Inter. Your interest in the men then, was not so strong as to prevent you from making that machine work for an interest in it; is this true?

Ans. That is true; my interest in the men was not so strong as my own self-interest. I was not as much for them as I was for myself.

16th Cross-Inter. You have stated that that was the last time that you had that tool in your hand; was that also the first time that you had it in your hand?

Ans. Yes, first and last.

17th Cross-Inter. Then do I understand that you have never seen that tool before or since?

Ans. I have seen it laying about since, in the closet where they keep their old pipes and things.

18th Cross-Inter. What became of that tool?

Ans. I don't know.

19th Cross-Inter. What has been your business since then; where have you been at work?

Ans. Can making and capping; I have been at work generally in Baltimore.

20th Cross-Inter. Have you ever seen a tool like Exhibit Weinbrenner in any of the shops, in use for capping cans?

Ans. Not that I remember.

21st Cross-Inter. When did you first see Exhibit Weinbrenner?

Ans. Not till this morning, that I know of.

22d Cross-Inter. Who showed it to you this morning?

222 Ans. I saw it at Mr. Brown's office.

23d Cross-Inter. Who made it.

Ans. I don't know.

24th Cross-Inter. Had you been consulted about it before this morning, and if yea, by whom?

Ans. By Mr. Weinbrenner, Mr. Kraft's partner, (not Calvin Weinbrenner,) and Mr. Kegan, this was day before yesterday.

WM. STEINER.

Subscribed and sworn to before me this 11th day of March, 1880.

ISAAC BROOKS, JR., *Examiner.*

Then adjourned to March 12th, 1880.

18—250

March 12th, 1880. Commission met, all counsel present.

Lawrence W. Counselman.

LAWRENCE W. COUNSELNAN, a witness produced on behalf of defendant, after being duly sworn, deposes and says as follows:

First Interrogatory. State your name, age, residence, and occupation.

Answer. My name is Lawrence W. Castleman; I am of legal age; I reside No. 120 N. Broadway; I am a fruit and oyster packer.

2d Inter. How long have you been in that business?

Ans. I went in the oyster business in 1868, on my own account; I never packed any fruit until 1870; prior to 1868, I managed the business for John C. Mahoney, and went with him in 1865.

223 3d Inter. What tool or machine other than the old straight iron, if any, was used in Mr. Mahoney's place of business for capping cans?

Ans. In the summer of 1866 or 1867, I am not sure which, there was a machine introduced there by Gray & Co. The machine, I think, set upon a table, with a revolving block, upon which the can was set, and a spiral spring, I think, that came down through the centre of a machine they had on top, which held the cap down. The rod held the cap down, this spring was only to lift the rod and to lower it. The soldering iron war stationary, and the can, when it was capped, was revolved around the soldering iron.

4th Inter. State whether or not the centre rod and the soldering iron were connected together.

Ans. It does seem to me that they were, but I am not certain about it, as it is so long ago, it might have slipped my memory.

5th Inter. What, to the best of your recollection, held the soldering iron in place, if it was not in some way attached to the rod?

Ans. It seems to me it was attached by an iron, extending from the top of the machine, through which the rod that held the cap passed.

6th Inter. State whether or not this machine was patented, and if so, whose patent was it?

Ans. I am unable to say whether it was patented or not; I know that Mr. Gray claimed the patent for it, and put it in Mr. Mahoney's house.

7th Inter. Have you not sufficient knowledge of drawings to be able to tell from them whether they describe a machine that you have seen?

Ans. I don't know, indeed; I might possibly.

8th Inter. Look at Fig. 3, in defendants' Exhibit "Hay," and state whether or not the machine you have described was similar to that? (Objected to.)

Ans. Yes, sir; I think that is the machine.

224 9th Inter. The machine described in Exhibit Hay seems to have been invented for putting the tops and bottoms on

cans only; state now particularly, whether or not, the machine at Mahoney's was used for putting caps on cans?

Ans. In the cans that Mr. Gray sold Mahoney, the head was entirely out from the top—which acted as a cap; that prevented it having a hole in the top of the can to put the oysters in—the whole head acting as a cap; there was a vent hole in the top of the can.

(It is agreed that the testimony of Mr. Counselman, with reference to the Gray machine, is not objected to for want of notice.)

Cross-examined by Mr. PRICE:

1st Cross-Interrogatory. I understand you to have said that Mr. Gray claimed a patent on this machine, at the time he brought it to J. C. Mahoney's place; was that James L. Gray?

Answer. Yes, sir.

2d Cross-Inter. The Fig. that you have testified to in Exhibit "Hay," is placed upon the patent that has been shown you, marked Exhibit "Hay," whereas the patent itself was granted upon the invention of James L. Gray, to said James L. Gray, assignor to F. M. Hay, M. L. Gray, and M. A. Gray. Did I understand you to say that you thought the machine as shown in Fig. 3, that you saw at Mahoney's in the summers 1866 and 1867, is the same machine for which Mr. James L. Gray claimed a patent at that time?

Ans. I think it is.

3d Cross-Inter. Without waiving any objection to this witness' testimony—I now call your attention again to that Fig. 3, and ask you if the use of the spiral spring as therein shown, is not to hold the rod down?

Ans. It looks to me as if it was so.

L. W. COUNSELMAN.

225 Subscribed and sworn to before me this 12th day of March, 1880.

ISSAAC BROOKS, JR., *Examiner.*

Mark O. Shriver.

MARK O. SHRIVER, a witness produced on behalf of defendants, after being duly sworn, deposes and says as follows:

1st Interrogatory. State your name, age, residence, and occupation?

Answer. My name is Mark O. Shriver; I am thirty-eight years of age; I reside in Baltimore; I am an oyster and fruit packer; I am a member of the firm of T. J. Myers & Co.; I have been with that firm since 1865.

2d Inter. In what capacity were you there engaged from 1865 up to the time you became a member of the firm?

Ans. As general manager and superintendent of the business.

3d Inter. State what kind of soldering irons were used in the

business of that firm, other than the straight or common iron, between 1865 and 1870?

Ans. We used an iron; I think it was Gray's machine; a party came from Hay's establishment—at least that is my impression; I think it was in the fall of 1867; we were capping peaches, I know.

4th Inter. Describe that machine as nearly as you can?

Ans. The machine was on a table about three feet high, by five feet long, and four feet wide; it may have been larger; it had a disk on the table upon which the can set; the disk was revolved by means of machinery connected by pulleys; then there was an iron that was heated in a fire-pot; it was placed over the can; it was lowered or raised by a treadle; I can't say whether the iron was lowered or the can was raised; the iron was held perma-
226 nently and the can revolved; I am not positive about whether the can revolved or whether the iron did, but I think the can revolved; there was a rod that came down in some way; it had three prongs to it that held the cap, with a spiral spring attached in some way to work it.

5th Inter. What was the function of this rod?

Ans. To hold the cap in position, whilst it was being soldered with the iron.

6th Inter. What did you use this machine in doing?

Ans. In capping peaches.

7th Inter. Do you or not think you would recognize this machine, if you were to see the drawings of it?

Ans. I think I would.

8th Inter. Please look at Fig. 3, in Exhibit Hay, and state whether or not that is the machine? (Objected to.)

Ans. I think this is it, but that the soldering iron was a little different from this.

9th Inter. In what respect?

Ans. I really would not like to describe the machine, as it has been so long ago, that my memory might be at fault.

Cross-examined by Mr. PRICE:

1st Cross-Interrogatory. How long since you have seen that machine?

Answer. I have not seen the machine since the fall of 1867, when it was there; I don't say positively that it was in the fall of 1867, but I think it was, we used it only about ten days, as near as I can recall it; what became of it after I don't know.

2d Cros-Inter. Have you ever seen one like it since?

Ans. I have seen similar machines what I might term an infringement upon that.

3d Cross-Inter. When have you seen similar machines since then in use.

227 Ans. I think we had a similar machine worked by E. C. Thomas, about three years after that, I don't think it was longer than that.

4th Cross-Inter. What was your object in having that machine there in 1867?

Ans. To facilitate capping cans, as I would wish to have any labor-saving machine.

5th Cross-Inter. Was it not a great object in your business to get a machine that would save labor and facilitate the capping of cans?

Ans. It was.

6th Cross-Inter. Why did you use this machine for only ten days?

Ans. It was roughly constructed, and it got out of order, and it did not facilitate our work.

7th Cross-Inter. What irons did you use before and since you used that machine? (Objected to.)

Ans. We used the old square iron like Exhibit Platt. I never knew of any other arrangement before that. Since then we used the Thomas machine that I spoke of, at least Mr. Thomas had it there; I don't know whose machine it was; I don't know how long we used the Thomas machine, but we never discarded the old straight iron, like Exhibit Platt; we used McMurray's machine there also.

8th Cross-Inter. What is the reputation of Mr. McMurray as a packer? (Objected to.)

Ans. First rate.

MARK O. SHRIVER.

Subscribed and sworn to before me, on the 12th day of March, 1880.

ISAAC BROOKS, JR., *Examiner.*

Then adjourned to March 13th, 1880.

228 March 13th, 1880, Commission met, all counsel present.

(It is agreed that George R. Mann may be examined on the question of prior use of Exhibit Centre Rod without the notice required by the act of Congress in such cases made and provided.)

George R. Mann.

GEORGE R. MANN, a witness produced on behalf of the defendants, after being duly sworn, deposes and says, as follows:

1st interrogatory. State your name, age, residence, and occupation?

Ans. My name is George R. Mann. I am fifty-five years of age. I reside in Kenty county, Maryland. I am a tinner by trade. I have been making cans for a number of years. Prior to living in Kent county I lived in Baltimore. I moved away from Baltimore in 1872. When I lived in Baltimore I was one of the firm of Mann & Grillett, and we were engaged in making cans.

2d Inter. Please look at Defendants' Exhibit "Centre Rod," and state anything you may know in reference to it.

(Counsel for complainants objects to showing this witness the Exhibit Centre Rod, and to all questions relating thereto.)

All I know about it is, that I used it; I can't say what year it was; to the best of my knowledge it was in the year 1856 or 1857; I used it at Pearce and Schoolfields; they were carrying on the fruit and oyster-packing business; they kept back of the corner of Baltimore and Bond streets.

3d Inter. How do you fix the date?

Ans. I went on the police force in 1858, and it was prior to that.

4th Inter. What use did you make of this machine?

A. I used it to cap up cans.

5th Inter. State the way in which it was used.

229 Ans. It was screwed to a bench and used with a treadle, putting your foot on the treadle brought the rod down on the cap, that is all I know about it.

6th Inter. What was the use of the rod, as you call it?

Ans. The treadle brought it down to hold the cap down.

7th Inter. How was the soldering done?

Ans. I dipped with an iron on the cake of solder and worked it around the crease.

8th Inter. What was the object in having the cap at the end of the rod as wide as in that machine?

Ans. I can't tell what the object was.

9th Inter. Are you or not confident that Exhibit Centre Rod is the identical machine that you you used in 1857? (Objected to.)

Ans. It is the same machine.

10th Inter. How do you know?

Ans. It has been in my possession ever since I used it, until I sent it up here.

Cross-examined by Mr. PRICE:

1st Cross-Interrogatory. When did you send it up here?

Ans. Last Monday week, I think.

2d Cross-Inter. To whom did you send it?

Ans. I sent it to my brother; I did know that he wanted to use it for Mr. Mallory in this case.

3d Cross-Inter. What is your brother's name and where does he live?

Ans. B. F. Mann; he lives 316 N. Broadway.

4th Cross-Inter. You say that this machine has been in your possession ever since you used it in 1857, where did you keep it?

Ans. I kept it home.

5th Cross-Inter. What use have you made of it since then?

Ans. I have made no use of it, except once in Slaughter & Co.'s packing house, when I had to sit down to work.

230 6th Cross-Inter. Since 1857, what part of your house have you kept that exhibit in?

Ans. Sometimes I would have it in the shop, and sometimes in the house.

7th Cross-Inter. Do I understand you, that you used a soldering iron in working on the cans with this machine, like Exhibit "Platt?"

Ans. Something similar to that.

8th Cross-Inter. What did you do with your other hand?

Ans. I turned the can.

9th Cross-Inter. So the work, I understand you, was done by holding a tool in one hand and a can in the other, whilst you turned the can partly with one hand and rubbed the iron with the other?

Ans. Yes.

10th Cross-Inter. Was the treadle held down by the foot at the time you were rotating the can with one hand, and holding the soldering iron with the other?

Ans. It has been so long since I used it that I am trying to think. I would have to have my foot on the treadle to keep the rod down.

11th Cross-Int. What other kind of irons have you used in soldering cans?

Ans. I have used irons like Exhibit Platt, except that they would be a little blunter.

12th Cross-Inter. What kind of a cap was used on cans which you soldered with Exhibit "Centre Rod?"

Ans. I used caps something similar to the convex cap.

Re-direct by Mr. SMITH:

1st Re-direct Interrogatory. On what was the can revolved? (Objected to.)

Ans. When I first used it I believe it revolved around on a pivot. The can was set upon some sort of a concern that revolved on a pivot, which had brass wheels on it, and I turned the can with my hand.

231 Re-cross-examination by Mr. PRICE.

1st Re-Cross Interrogatory. When you ceased to use this apparatus, what kind of soldering tool did you use after that to cap cans?

Answer. I used nothing but a bar of solder and an iron like Exhibit Platt.

2d Re-Cross-Inter. What was the reason that you abandoned the use of Exhibit Centre Rod, and went back to the bar of solder and the old straight iron?

Ans. I thought I could get along faster.

3d Re-Cross-Inter. Then you thought the old-fashioned way of using a bar of solder to hold the cap in place, and the old straight iron for soldering the cans, a better and quicker method of soldering caps on cans than by the use of Exhibit "Centre Rod?"

Ans. I thought with the way of holding the bar of solder on the

cap, and using the old straight iron, I could get along better. I don't know whether you call that the old-fashioned way or not.

4th Re-Cross-Inter. And I understand you further to say that you have pursued this method ever since, and have never attempted to use the "Centre Rod" since 1857, except upon one occasion when you could not stand up?

Ans. To the best of my knowledge.

5th Re-Cross-Inter. What did the can sit upon on that occasion?

Ans. It set on the bench.

6th Re-Cross-Inter. What became of the table and the piece with brass wheels which were on it, upon which the can sat, when you first used it?

Ans. I can't tell what has become of it. I carried it to the country when I moved from the city and I probably left it there.

GEORGE R. MANN.

Subscribed and sworn to this 13th day of March, 1880.

ISAAC BROOKS, JR.,
Examiner.

232 Then adjourned to March 15th, 1880.

March 15th, 1880. Commission met. All counsel present.

Charles E. Hall.

CHARLES E. HALL, a witness produced on behalf of the defendants, after being duly sworn, deposes and says, as follows:

First Interrogatory. State your name, age, residence, and occupation.

Answer. My name is Charles E. Hall; I am thirty-four years old; I live No. 46 East street, Baltimore; I am a processor of fruits and oysters.

2d Inter. Do you or not understand the business of capping cans?

Ans. I do understand the business of capping cans.

3d Inter. When did you learn this business of capping cans? (Objected to.)

Ans. I have been acquainted with it all my life, since I was a young man.

4th Inter. State what kind of irons or tools for capping cans have been used by you, other than the old straight iron?

Ans. Two pointed irons and two floating irons, made to revolve on the crease.

5th Inter. If you have drawings of the irons used by you, please file them. (Objected to.)

Ans. I herewith file them, marked Exhibits "Charles E. Hall" numbers 1, 2, 3, 4 and 5.

6th Inter. Look at Exhibit "Charles E. Hall" No. 1, and describe the various parts of it, and the purposes which the various parts perform? (Objected to.)

233 Ans. The rod in the centre was intended to hold the cap

on; the rod ran down between the two irons, with two pieces of copper on each side of it; those pieces of copper were fastened into a piece of half-inch iron, with a piece of gas-pipe down the centre, with two set screws on each side to hold the copper. The machine revolved on the rod in the crease of the can.

7th Inter. When and where, if at all, did you use a machine constructed upon that drawing? (Objected to, but not because it is leading.)

Ans. At Pearce, Hoff & Company'y, 75 and 77 North Calvert st., in about 1864.

8th Inter. How do you know it was about that time?

Ans. I only judge, because the war was going on; and if my memory serves me right, Pearce, Hoff & Co. were in business at that time. If it was not done during the time Pearce, Hoff & Co. had the building; it was done in the same building, when Berry & Co. had the building.

9th Inter. In whose employ were you at that time?

Ans. I was employed by both firms, and tried capping irons with both firms.

10th Inter. State what use was made of the iron?

Ans. It was used for capping cans; it was used by me only.

11th Inter. State whether or not your use of this iron became known to your fellow employees; and if so, when?

Ans. It was when I was employed with Mr. Pearce; I am speaking of the third iron; the first one no one saw; I think it was in 1863 or '64.

12th Inter. Is the third iron shown by either one of the five drawings filed by you; and if so, which one? (Objected to.)

Ans. It is shown by Exhibit "Charles E. Hall" No. 1.

13th Inter. State whether or not you made any sales of a model of any one of these irons; and if so, which one, when, and to whom? (Objected to.)

234 Ans. The one that I sold was not exactly like this shown Exhibit "Charles E. Hall," No. 1, it worked on the same principle, only it had one iron instead of two. (Objected to.)

14th Inter. To whom did you sell it?

Ans. A party named Reuben Allen, now dead; I can't tell what year that was, I can only tell by the year Mr. Berry had his factory on York St.; It was the first year.

15th Inter. Had the war closed at that time?

Ans. I think it had.

16th Inter. Give the year as near as you can?

Ans. I can't do it.

17th Inter. Was it or not prior to 1870?

Ans. I think it was, I am not certain.

18th Inter. How long did you use that third iron or one similar to it?

Ans. Some two or three weeks; I was trying the iron.

19th Inter. Who saw you trying it these two or three weeks?

Ans. Well I don't know, I could not say, because the first, second, and third irons were all nearly alike; they all worked on the same motion, they all revolved around the first iron as I said before; I broke up the second iron, I know several saw me working it; well I don't know much about the third iron, I can't say much about it. What I mean by that is, that I did not keep it as private as I did the other irons.

20th Inter. Why did you cease using these irons after two or three weeks?

Ans. I don't know what was my reason.

21st Inter. How did they work?

Ans. They didn't work very good at all.

22d Inter. Did you or not, subsequently make any improvements to make them work well, and if so when?

Ans. I did; I couldn't tell you when, I was working on them all the time; I could not tell when I stopped or when I commenced, when I got tired of them, and picked them up again.

235 23d Inter. About what time did you make the improvements which made the irons work well? (Objected to.)

Ans. I could'nt tell that.

24th Inter. How long ago, to the best of your recollection?

Ans. I think it was in sixty-five.

25th Inter. Are you or not positive that it was before eighteen hundred and seventy?

Ans. It was before eighteen hundred and seventy.

26th. Inter. When you got the iron to work well, before eighteen hundred and seventy, did you or not use it?

Ans. I did not.

27th Inter. How did you know it worked well?

Ans. Well, the way metal flowed.

28th Inter. Did you or not use it, to find how the metal flowed? (Objected to.)

Ans. I had to use it or I could'nt tell how the metal did flow.

29th Inter. What was the nature of the improvement that you made, which caused the metal to flow better?

Ans. I filed a kind of a slot or gap at the end of the rod, which enabled the can to vent better.

30th. Inter. Why was it that the first irons made by you did not work well? (Objected to.)

Ans. Well, there were two or three reasons; first one was, that the machine was too hot for me to handle, with the naked hand, then I used a rag on it; then I flowed the metal, but the can wasn't tight, because there were pin holes or blisters all around the crease.

31st Inter. If the first irons made by you had been mounted with wooden handles, and had had a slot at the bottom of the rod to give a vent, how would they have worked? (Objected to.)

Ans. They would have worked very well.

32d Inter. Is it not your opinion that if that had been so con-

structed, cans could have been securely capped with them? (Objected to.)

236 Ans. After I got the vent into the rod I could flow the metal; I could have securely capped cans.

33d Inter. Why did you not use the iron after you made the improvements, prior to 1870.

Ans. One reason was, because I had no money to have the irons made right; and the other reason was, because after I was caught using the second iron they told me it was impossible to cap a can with the machine and make it tight.

34th Inter. The question I put to you is this, after you made the improvements, by putting a slot in the bottom of the rod, and found that the metal would then flow well, why did you not use the machine?

Ans. Well, the reason was what I said before, because I neither had the money nor I didn't get any encouragement from any one to push me on with it.

35th Inter. You say they told you it wouldn't work well, who were they?

Ans. Those were the hands in the house, such as can makers and cappers.

36th Inter. Did you or not, after 1870, make any improvements, and if so, state about what time, and what the improvements were?

Ans. Well, after that, I worked on that machine there.

(Defendant herewith files a machine, marked Exhibit "Charles E. Hall Model," to the filing of which the complainant objects.)

37th Inter. What do you mean by working on that machine?

Ans. Improving on my drawings.

38th Inter. Who made that machine, and by whose order was it made, and when?

Ans. I believe Stevenson & Plunkett made the machine, by Mr. Alfred S. Day's order. I think it was near 1876.

39th Inter. Who made the drawings for the machine?

Ans. I did, sir.

237 40th Inter. How many persons, to the best of your recollection, prior to 1870, saw and knew you were using the irons you first described? (Objected to.)

Ans. Well, I can't say, after I was found out getting up the second iron; I don't know any specified number; it is a hard matter for me to tell; I have tried so many of those things; I couldn't say how many persons.

41st Inter. About how many persons were employed in and about the premises where you used those irons? (Objected to.)

A. I guess about a hundred and fifty, male and female.

42d Inter. State whether or not, after you were found out using the second iron, did these people, or any of them, see your irons in use? (Objected to.)

Ans. I only had one iron, and several of them around the place did see me use it.

43d Inter. What do you mean by having only one iron, since you have spoken of having the first, second, and third irons?

Ans. Well, I was only working on one at a time.

44th Inter. After you were found out using the second iron did or did not all of the one hundred and fifty people have a chance of seeing, if they had seen fit to look at it. (Objected to.)

Ans. Well, I guess they had, but I don't know; they had the privilege of going all over the house.

45th Inter. After you were found out using the second iron, did you or not make any effort to keep people from seeing it. (Objected to.)

Ans. I can't say if I did or not.

46th Inter. You have stated that several persons, after you were found out, did see you using it; please give the names, if you can, of some of these persons.

Ans. I cannot give the names; it it too far back for me to remember.

238 47th Inter. Was the use of the iron known to your employers?

Ans. Mr. Stephen A. Pearce knew. I don't know that Mr. Hoff saw it, but I don't think he did.

48th Inter. Are these gentlemen living?

Ans. I think Mr. Hoff is living. Mr. Pearce is dead.

49th Inter. Where does Mr. Hoff live?

Ans. His place of business is on the corner of Franklin and Pennsylvania avenue.

50th Inter. Give the names and residences of any persons who worked at Pearce & Hoff's at the time you used the iron.

Ans. Edward Brady, white, was one; I don't know where he lives. I think Albert Brooks was another that worked there; don't know where he lives. I think his brother, George Brooks, was foreman of the can shop at the time; don't know where he lives. I had a brother who worked there at that time; his name is Louis J. Hall; he lives on Eutaw between Biddle and Preston; he is sexton of Calvary Baptist Church, on Preston street. I don't remember any others.

Cross-examined by Mr. PRICE:

(Complainant's counsel, without waiving any objection he may have to the testimony of Charles E. Hall, nevertheless proceeds to cross-examination.)

1st Cross-Interrogatory. Look at the drawings which you filed this morning, marked Defendants' Exhibits numbers one, two, three, four, and five, and state when those drawings were made.

Answer. About seven or eight years ago.

2d Cross-Inter. Since eighteen seventy, you think?

Ans. Ans. It might have been then or later. There were about two dozen of them, and those are all that are left.

3d Cross-Inter. Defendants' counsel has asked you a num-
239 ber of questions about the use of the old irons, which you have designated as the first, second, and third irons; do I understand you that those irons were ever in actual use in capping cans, or were you only experimenting and improving in order to get an iron which would work satisfactorily for that purpose?

Ans. That's all I was doing—only experimenting.

4th Cross-Inter. When you had constructed the first iron what precautions did you take to keep it secrect?

Ans. I kept it in the process department up between the joists.

5th Cross-Inter. Were the hands at that time permitted to go in and out of the process department?

Ans. They were not.

6th Cross-Inter. Why were they not permitted to go in and out of the process department?

Ans. Because processing at that time was a deep secret, and kept secret from outsiders.

7th Cross-Inter. Did you keep this tool hid away between the joists in the process department because you believed it would be safe there, and could not be seen by the other hands in the shop?

A. I did, sir.

8th Cross-Inter. You have said that this first tool you broke up; why did you break it up?

Ans. Because it wore out my patience.

9th Cross-Inter. It was not then a success, I understand you?

Ans. Yes, sir; it was not.

10th Cross-Inter. After you had broken up the first tool, I understand you went to work experimenting on the second; am I correct?

Ans. Yes, sir.

11th Cross-inter. Was the second one a success?

Ans. No; I don't believe that was either; I had about the same trouble that I had with the first one; only I was caught using the second.

12th Cross-Inter. How were you caught?

240 Ans. I was caught trying to solder a cap with it by some of the workmen in the house—I don't know who.

13th Cross-Inter. What became of the second one—what did you do with that?

Ans. I don't know; I don't remember certainly what became of it.

14th Cross-Inter. Were you trying to keep it secret when you were caught trying to solder a cap with it?

Ans. I think I was.

15th Cross-Inter. After you had abandoned the second iron, did you then go to work experimenting on the third?

Ans. I did, but the second and third were very much alike.

16th Cross-Inter. Then I understand that you do not consider the third a success either?

Ans. Not exactly.

17th Cross-Inter. Which of these irons was it—the first, second, or third, that the can makers who saw it told you would never solder a can tight?

Ans. The second iron.

18th Cross-Inter. Which one was it that you sold?

Ans. It was something on the principle of the third iron.

19th Cross-Inter. Then I understand you that it was not either the first, second, or third iron that you sold?

Ans. It was not an iron at all that I sold—it was only a wooden model.

20th Cross-Inter. Do I understand you to say that none of these irons were ever used by anybody but yourself?

Ans. Not that I know of; no one but myself.

21st Cross-inter. After you had broken up the first iron and did not know what became of the second, what did you do with the third—what became of that?

Ans. I don't know what became of it.

22d Cross-Inter. How long has it been since you have seen it?

Ans. I don't remember seeing it from that day to this.

241 23d Cross-Inter. After you had broken up the first iron, and abandoned the second and the third, do I understand you that you then began experimenting on a machine like "Charles E. Hall Model?"

Ans. Yes; with the drawings.

24th Cross-Inter. You never made a machine like that model, I understand?

Ans. No, sir.

25th Cross-Inter. Then the first one that was made was the one under the orders of Mr. Day, in 1876, is this true?

Ans. Yes, sir.

26th Cross-Inter. Do I understand you to say that from the time you made the first machine, up until the time this one was made in 1876, you were continually experimenting and trying to get up a tool that would be practically useful in capping cans?

Ans. Only in drawings; I never made any beside the three that I have mentioned.

27th Cross-Inter. What has been your business all this time?

Ans. Processing in fruit and oyster factories.

28th Cross-Inter. What did Reuben Allen do with the model which you sold to him?

Ans. I don't know, sir.

29th Cross-Inter. Have you ever heard of it since, or made any inquiry about it?

Ans. No, sir; I know I have never seen it since, and don't remember ever asking about it.

Re-direct examination by Mr. SMITH:

1st Re-direct Interrogatory. When did you make your first drawing?

Ans. The first of all I made in 1863 or 1864.

242 Re-Cross-examination by Mr. PRICE:

1st Re-Cross-Interrogatory. Are these drawings which you have filed to-day, those which you made in 1863 or 1864?

Ans. No, sir. These drawings are improvements on those which I made in 1863 and 1864.

CHAS. E. HALL.

Subscribed and sworn to before me, this 15th day of March, 1880.

ISAAC BROOKS, JR.,
Examiner.

Alfred S. Day.

ALFRED S. DAY, a witness produced on behalf of the defendants, after being duly sworn, deposes and says, as follows:

1st Interrogatory, State your name, age, residence, and occupation?

Ans. My name is Alfred S. Day; I am thirty years of age; I am at present a bookkeeper; have been in the oyster and fruit packing business; I reside in Baltimore.

2d Inter. State what, if anything, you know of Defendants Exhibit, "Charles E. Hall Model?"

Ans. In 1876, I was in the hermetically sealed can goods business, and Charles E. Hall was processor and foreman of the can shop. I was desirous of getting a machine of some kind for capping cans, and consulted him in reference to it. He told me that he had several drawings, and he brought them down to me from his house, and from the lot I chose the drawing that this exhibit model represents —I had this machine made by my orders, and used it.

243 Cross-examined by Mr. PRICE:

1st Cross-Interrogatory. About what time in the year 1876 was it that you had it made?

Answer. During the month of August.

2d Cross-Inter. How long did you use it?

Ans. I couldn't state the exact length of time; I don't think it was used more than two or three days before that wheel broke, and I was obliged then to give it up, because it was too late in the season to get it repaired.

3d Cross-Inter. Was it ever repaired and used after that?

Ans. Not to my knowledge.

4th Cross-Inter. What became of it after that?

Ans. It remained in the factory until the following year, when I failed in business, and I gave it to Charley Hall.

5th Cross-Inter. Did you ever have more than this one machine made, or did you ever attempt to get up one like it?

Ans. That was the only one that I had made.

ALFRED S. DAY.

Subscribed and sworn to before me this 15th day of March, 1880.

ISAAC BROOKS, JR., *Examiner.*

Then adjourned to 16th of March, 1880.

Commission met, all counsel present.

Then adjourned to meet March 18th, 1880.

244 March 18th, 1880. Commission met; all counsel present.

(Defendants herewith file the following exhibits: Barker Re-issue Record and Bostwick Re-issue Record.)

(Objected to by counsel for complainants.)

William Foust.

WILLIAM FOUST, a witness produced on behalf of defendants, after being duly sworn, deposes and says as follows:

1st Interrogatory. State your name, residence, age, and occupation?

Answer. My name is William Foust; I reside at Pittsburgh; I am sixty-one years of age; I am an engineer in the gas works; I have been engineer in the gas works for six years.

2d Inter. State whether or not you are the William Foust who, on or about the 22d day of December, 1868, applied for a patent for a can opener to the Commissioner of Patents of the United States. (Objected to, but not because it is leading.)

Ans. I am.

3d Inter. Please produce a certified copy of your application, and of the proceedings thereunder? (Objected to, but not for want of notice.)

Ans. I herewith produce and file them, marked Defendants' Exhibit, William Foust.

(To the filing of which exhibit, and to all testimony in relation to the same, complainants' counsel objects.)

4th Inter. State whether or not any tools were made in accordance with the drawings in your application; and if so, when, where and what was done with them?

Ans. There were some made from 1868 to 1870; they were
245 made at the Pittsburgh Novelty Works; I sold some few, maybe a hundred of them, and gave away more than a hundred.

5th Inter. When did you sell and give away these irons?

Ans. About 1868—about the time the patent was applied for.

6th Inter. State the names and residences of some of the persons to whom you sold or gave away any of these tools?

Ans. T. J. Strowbridge, of Beaver Falls, Pennsylvania; Jacob Kinzey, Pittsburgh; James Gray, Beaver Falls. That is about all I can now place to whom I gave the iron. As to those to whom I sold, I cannot tell you, because they were sold by peddlers who were peddling other stuff at the same time.

7th Inter. If you have one of the tools that was made by you between 1868 and 1870, please produce it and file it. (Objected to.)

Ans. I have, and herewith file it, marked "Defendants' Exhibit "Foust Tool."

(The filing of the exhibit objected to.)

8th Inter. How many irons like this did you have made?

Ans. I think my bill for these irons was thirty dollars.

9th Inter. How much did they cost you apiece?

Ans. I think they cost between four and five cents apiece.

10th Inter. That would make about six hundred that you had made. Now how many had you on hand about the first of the year 1870?

Ans. About four hundred, or in that neighborhood.

11th Inter. Where were those you had on hand at that time?

Ans. In the Novelty Works.

12th Inter. What opportunities, if any, had the people engaged in the Novelty Works of seeing these irons?

246 Ans. Not very much; I had them in the engine room; if any one came in there he could see them.

Cross-examined by Mr. PRICE:

(Counsel for complainants proposes to cross-examine this witness without waiving any objection to the witness, or to the testimony and exhibits that have been filed.)

1st Cross-Interrogatory. When you made your application, as contained in Defendants' Exhibit, William Foust, what happened to it?

Answer. It was rejected.

2d Cross-Inter. After it was rejected, what did you do—what further steps did you take?

Ans. No further; I got rid of my castings.

3d Cross-Inter. How did you get rid of your castings?

Ans. I sold what I had left to a foundry man, for scrap iron to melt over.

4th Cross-Inter. Do you mean by your castings, all the tools you had left, like Defendants' Exhibit Foust Tool.

Ans. Yes.

5th Cross-Inter. Have you done anything with it since, or made any tools since?

Ans. No, sir.

6th Cross-Inter. I understand you, then, to say, that you abandoned the entire apparatus, patent and all, after the rejection?
A. Yes.

Re-direct by Mr. BROWN:

1st Re-direct Interrogatory. What do you mean by saying that you abandoned your invention after the application for the patent was rejected?
247 Answer. I mean that I had no claim, and the castings I did not dare to sell, and I had to sell them by the quantity to melt up.
2d Re-direct Inter. Why did you not dare to sell, after your patent was rejected, in the same way you had sold them before it was rejected?
Ans. Before I had filed an application—after it was rejected I had no application and I had no right to sell them.
2d Re-direct Inter. Were you or not informed that a patent had already been granted for the same iron or tool for which you had applied for a patent? (Objected to.)
Ans. I was informed that there was a grant given, and that this was an infringement on it. (Answer objected to.)

WILLIAM FOUST.

Subscribed and sworn to before me, this 18th day of March, 1880.
ISAAC BROOKS, JR., *Examiner.*

Ellis Spear.

ELLIS SPEAR, a witness produced on behalf of defendants, after being duty sworn, deposes and says as follows:

1st Interrogatory. State your name, age, residence and occupation?
Answer. My name is Ellis Spear; I am forty-six years of age; I reside in Washington, D. C.; I am a solicitor of patents.
2d Inter. What has been your several occupations since the war closed in 1865?
Ans. I was for several years an examiner at the Patent Office, afterwards one of the Board of Examiners in Chief, subsequently Assistant Commissioner, and then Commissioner of Patents.
248 3d Inter. What knowledge have you of inventions and mechanical devices generally?
Ans. I have since 1865 been engaged exclusively in considering such matters; I consider myself an expert in mechanical matters, and patents relating thereto—excepting that I am not a practical mechanic.
4th Inter. Have you or not examined the Barker and Bostwick, and Ewalt & Tillery patents, and re-issues mentioned in these proceedings?
Ans. I have examined the Barker and Bostwick patents of 1870,

and the re-issues of these patents, and a patent of Ewalt & Tillery, No. 127,120, of May 21st, 1872.

5th Inter. If there are tools in the room made from the Barker and Bostwick original patents, please indicate which they are?

Ans. I recognize this on the table before me marked Defendants' Exhibit J. T. Jones, as made in accordance with the Bostwick patent, and Defendants Exhibit J. T. Jones No. 2, also placed on the table before me, as made substantially in accordance with the Barker patent. I have seen these exhibits before and have compared them with the patents.

6th Inter. Now look at Complainants' Exhibit Ewalt & Tillery Model, and state whether or not that model is an infringement upon either the Bostwick or Barker patents, and define fully the difference, if any,—and give your reasons fully for any opinion you may express thereon?

Ans. I assume that the question refers to the existing patents, Barker, No. 8781, and Bostwick, No. 8466. I think the exhibit is an infringement on the 1st and 2d claims, or the terms of the claims as they now stand in the Barker patent, and possibly the 4th claim of the same patent, unless these claims are more narrowly limited by the specifications. The first claim of the Bostwick patent is broad enough in the terms of the claim itself to cover the exhibit of Ewalt & Tillery. It appears to me however, that the terms of these claims are broader than the description would justify in
249 the original patents, or that they contain or include different matter from that described in the original patents.

Referring to the Barker patent, I think the device is erroneously described in the 1st and 2d claims, and that there is nothing in the device or in the original patent, to justify the terms "to be rotated about said rod;" I do not find anything in the original patent of Barker to warrant that expression, or to indicate that the inventor contemplated that operation of the machine, nor does the apparatus itself, as illustrated in the drawings or described in the specifications, appear to me to be adapted to operate in that way; there is no central point shown or described in the patent; there is a side rod described connected with the central rod, which serves as the handle, and which passes through the iron so as to be flush with the face of it or to project through it; the whole device appears to me adapted to be turned by its handle, which is the upper end of the fixed central rod, and when it is so moved or turned, the side rod which passes through the iron would be moved with the iron, and that the iron would not turn, and it was not originally described by the inventor as turning upon this side rod; it appears also to me, that the soldering iron is not correctly described in the 4th claim of the Barker patent as "mounted" upon the movable or side rod; the movable rod is attached to the soldering iron and its handle, as an auxiliary thereto, being movable in relation to the iron as the fixed part; referring to the Bostwick patent, I think the first claim erroneously describes the device shown as a "central

pivotal rod;" what is called a central pivotal rod in the re-issued patent, appears to me, both from the original description, and from the device shown and described in the patent, to be a weight adapted to hold the cap of the can to be soldered by its weight, and not to serve as a fixed pivot, about which the tool is to be rotated, and by which it is to be steadied and directed.

7th Inter. Independently of the claims made in the Barker and Bostwick re-issue, please define what mechanical differences,
250 if any there are, between the identical Barker and Bostwick patents, as described in the patents and drawings, and the Ewalt & Tillery model?

Ans. In the Ewalt and Tillery Model there is a central rod provided with a handle, by means of which the lower end of the rod is to be held upon the cap of the can, and there is a soldering iron connected to this rod and adapted to be turned upon this rod as a centre, and to be guided by means of the rod in a circular path over the circular depression in the can, or the line of the junction to be soldered. The central rod serves two purposes—that of holding down the cap or affording means by which the cap is held down, and as a pivot on which the iron is turned. The device shown by Barker is a tool adapted to cover at once and without turning, or rather without complete rotation—all the parts to be soldered—and it is provided with a rod by means of which the cap can be held down after the iron is removed. The device shown by Bostwick appears to me also adapted to cover all the solder at once, and is provided with a central weight for holding down the cap, but does not appear to be provided with a pivot on which the iron is to be rotated.

8th Inter. What is your opinion as to the patentability of the Ewalt & Tillery Model, subsequent to the granting of patents to Barker and Bostwick, and give your reason for your opinions?

Ans. I think the Ewalt & Tillery device patentable, notwithstanding the prior devices of Barker and Bostwick, for the reason that it has a central rod by means of which the cap can be held down, while the iron is rotated about it, and which, at the same time, serves as a central pivot upon which the soldering iron is turned and guided.

9th Inter. Suppose, while you were Commissioner of Patents, application should have been made to you by Barker and Bostwick for these patents, and you had been informed that in order to cap a can securely it was necessary to have a vent somewhere in the cap or can, and that this vent, as used in the trade, was in the centre of the cap, and also that it was necessary to hold the cap se-
251 curely in place during the process of capping, would you or not have granted a patent either to Bostwick or Barker, and give your reasons? (Objected to.)

Ans. I should have granted the patent in either case, unless the devices were shown not to be new with these inventors, or unless the devices were clearly shown not to be operative, I am unable to

say, whether under the conditions stated in the question, either of those results would appear.

10th Inter. Suppose it were demonstrated to you that the vent as used in the trade, for reasons known to the trade, is placed in the centre of the cap, and that in the case of the Bostwick patent the centre weight would stop this vent, and that as a result, the can would not be securely capped, and that the oysters or fruits would spoil; would you or not, under those circumstances, have granted a patent to Bostwick if his invention was designed only to cap hermetically sealed fruits and oysters? (Objected to.)

Ans. I should grant the patent, unless it were made to appear that the results stated in the question would follow unavoidably; if the invention appeared to be useless or inoperative, it could not be patented under the law.

11th Inter. Suppose the facts set forth in the last question were shown to exist, except as to the vent, and it were further shown that the operation of the Barker iron would tend by the motion of the side rod on the cap, to displace the cap, and it were further shown that the handle and side iron would become so heated that they could not be handled, would you or not have granted a patent to Barker? (Objected to.)

Ans. I am unable to say with positiveness, that under such conditions I should refuse the patent; the practice of the office is not ordinarily to inquire very closely into the utility of the invention, provided it is shown not to be absolutely injurious, or absolutely inoperative, for the purpose intended, and I am unable to say that under some conditions such a device could be used, I should give the applicant the benefit of the doubt.

252 12th Inter. Suppose a machine like Exhibit "Foust Tool" were shown to be in use or patented, for soldering or unsoldering caps, would you or not, as Commissioner of Patents, grant a patent for a weight, to go through that hollow cylinder, to hold the cap during the process of soldering or unsoldering?

Ans. I think it extremely doubtful, that a broad claim could be allowed for the use of a weight to hold the cap down, while such a tool was applied to the solder.

13th Inter. Why not?

Ans. For the reason that it is no more than the ordinary use of a weight to hold an article down.

14th Inter. Leaving out the centre weight, what difference of principle is there, if any, between the Bostwick model and the Foust tool? (Objected to.)

Cross-examined by Mr. PRICE:

1st Cross-Interrogatory. Suppose this weight, in combination with the tool, accomplished a new and useful purpose, differing in result from anything that had been accomplished by either the weight or tool separately, would that combination be patentable?

Answer. Yes, being the result of a combination.

2d Cross-Inter. Suppose a circular ring of iron would lift the cap, by reason of the adherence of the solder to the cap and tool, while in a liquid state, and an inventor should devise a central rod or weight to hold the cap in place, and keep it held, until the solder had set or hardened; do you think the combination of such a rod with the tool would be patentable, as effecting a result due to the combination of the two?

Ans. It might.

3d Cross-Inter. In answer to the 5th interrogatory-in-chief,
253 you have said that Defendant's Exhibit J. T. Jones No. 2 was made substantially in accordance with the Barker patent, what did you mean by the word substantially in connection with your answer?

Ans. There may be differences in the proportions of the parts, the relative size of the rod and iron.

4th Cross-Inter. May there not be other differences, for example, the material of which the tool is made?

Ans. There may be; I did not observe particularly in the patents the specific materials.

5th Cross-Inter. Look at the patent and see whether under the specifications in said patent that tool may be made of any other material?

Ans. Looking at the specifications in the original patent, I do not see that any particular material is specified, or that the inventor limits himself to any particular material.

6th Cross-Inter. If wooden handles were placed upon the rods of that tool, would it in any manner vary or alter the original invention as described by Barker? (Objected to.)

Ans. I am unable to say.

7th Cross-Inter. Does Barker limit himself in his patent to any material of which those handles should be made?

Ans. He does not limit himself in the material at all.

8th Cross-Inter. Look at the hole through the disk, and state whether Barker in his patent limits himself to any particular size of hole through which this movable rod passes?

Ans. There is no limitation in the original specifications, except that it should be sufficient to allow the rod to "slide up and down."

9th Cross-Inter. What does Barker say in his patent about the recess in the under side of the iron, and the function of that recess?

Ans. He states in the original specifications that "the recess B in the under side of the disk is to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover."

10th Cross-Inter. Does Barker under that description or elsewhere in the specifications limit himslf to any particular shape of the soldering iron at the bottom?

254 Ans. No further than that he describes it as a disk.

11th Cross-Inter. Should an iron be so made at the bot-

tom, as to fit in the crease of a can, would such an iron be within the description given by Barker in his patent?

Ans. I think a mere variation in form of outline would not be a material variation.

12th Cross-Inter. Look at the form or outline of Model J. D. W. No. 1; state if that is sufficiently within the description of the Barker Patent, and made in accordance therewith.

Ans. It appears to me to have all the elements of the Barker Patent. There is a variation in the shape of the annular face of the iron, but I am not advised that that would make any difference.

13th Cross-Inter. Point out in the specification of the Barker Patent what the description is of that annular face to which you refer?

Ans. There is no specific description of the face, but is shown as a plain face.

14th Cross-Inter. Do I understand you to say, that that model, you believe to be made in accordance with the Barker original patent substantially?

Ans. I see no essential difference.

15th Cross-Inter. Look at the three exhibits now shown you, J. D. W. No. 2 and Lang Nos. 1 and 2 Models, and state whether you will say the same thing in reference to those models.

Ans. I see no difference, except in the relative proportions of the parts, and in the shape of the cavity, and in J. D. W. No. 2 the face is beveled; whether or not these variations would materially affect the device I am unable to say.

16th Cross-Inter. Is there any other restriction in the specifications of the Baker Patent than that it may give room for the convex lid of the can, and confine the soldering process to the outer edge of the lid or cover?

Ans. None are described.

255 17th Cross-Inter. I understand you, then, to say that all of these models are made substially in accordance with the Barker Original Patent?

Ans. Yes, I think they are: they contain all the elements of that patent.

18th Cross-Inter. Look now at Complainants' Exhibit "Barker Wooden Handles," and state whether that exhibit is made in accordance with the specifications and claims of the Barker Original Patent?

Ans. It is the same, excepting shat the annular face is changed, and a wooden handle is added to the central rod, and a wooden handle to the side road; I do not regard the addition of the wooden handle to the centre rod as anything more than the substitution of one well-known material for another. As to the effect of the beveling of the face, I do not know. The addition of the handle to the

side rod might be an essential addition to the device, whether made of wood or any other material.

The [Commission] adjourned to March 19th.

March 19th, 1880. Commission met, all counsel present. The cross-examination of the witness was then resumed.

19th Cross-Inter. You say the annular face is changed; please tell us what description Barker gives of the annular face, so that you may afterwards explain the change?

Ans. There is no description of the face, except that it has a cavity, which leaves an annular portion, and this annular portion is shown as a plain surface in the drawing.

20th Cross-Inter. Is not the drawing attached to the patent, usually intended to represent a single form of the apparatus, described in the specifications of the patent?

Ans. That would depend upon the nature of the invention. It should always illustrate one way of carrying the invention
256 into effect; there may be, and very often are, variations or modifications more or less obvious of the form shown in the drawings, which would still be within the principle of the invention.

21st Cross-Inter. Suppose the object of the invention in this case to be to solder a cap on a can, the inventor, whilst not describing in his specifications any form of annular face in the iron, but still tells you that it must be constructed with a recess in the under side, to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover, would not this language be sufficiently broad to warrant a party making that tool, within the scope of the patent, to construct the annular face, of any form, providing the recess of the under side would admit the convex lid of the can, and confine the soldering process to the outer edge of the lid or cover?

Ans. I think it would, unless it interfered with the operation of the apparatus, as described by the inventor.

22d Cross-Inter. What depth does Mr. Barker say in his patent shall be given to the recess B?

Ans. There is no limit, except that it shall give room for the lid of the can?

23d Cross-Inter. What length does he tell you to make the handle?

Ans. He does not prescribe the length; it shall be of only "sufficent length to hold when heated."

24th Cross-Inter. Of what does he require the metal disk to be made?

Ans. Of sufficient thickness to retain the heat.

25th Cross-Inter. You have noticed in your testimony what you think to be a variation between the Original Barker Patent and the fourth claim of the Re-issue, and to the language in that claim,

" upon which the said tool is mounted," and you seem to think that the rod is mounted upon the tool, instead of the tool mounted upon the rod: when the Barker Patent is in actual work soldering cans, and the solder has been melted, the rod being held in its
257 place upon the cap of the can as a fixed part, and the disk is slided up the rod and held there until the solder is hardened, in that case, is the tool mounted on a rod, or the rod mounted on the tool?

Ans. I should say that the proper description would be that the tool was raised and held by the operator, and in that part of the operation it has no connection with the soldering tool, as an operative part, it is simply connected with it, because from the attachment of the rod to the iron it cannot be taken away.

26th Cross-Inter. I now call your attention to the following language of the specifications, and I ask you if you think that a proper description: " The disk is then to be withdrawn with the rod still pressed upon the lid, until the solder or sealing material sets or hardens, when the operation is completed?"

Ans. Yes.

27th Cross-Inter. Whether, as a matter of fact, the tool be mounted upon the rod, or the rod be mounted upon the tool, do I understand you to say that the language quoted in the fourth claim is not sufficiently descriptive of the manner in which the tool is made, to enable a mechanic to construct the same without being led astray by that language?

Ans. If the mechanic had the complete drawing and specifications, I think the language quoted would not be sufficient to mislead him.

28th Cross-Inter. Whether that rod be mounted upon the tool, or the tool upon the rod, is not the mode of mounting the Ewalt & Tillery tool substantially the same?

Ans. I think not. The Ewalt & Tillery tool is mounted upon a central rod, adapted to be held with the hand, while the tool is capable of sliding upon the rod and of being rotated upon the rod.

29th Cross-Inter. Is there any difference in the manner in which the rod is held, and the iron slided up and down the rod, between the Barker tool and the Ewalt & Tillery?

258 Ans. The devices are not constructed alike in respect to these functions. In the Ewalt & Tillery the central rod is provided with a handle, by means of which it may be held immovable, and by reason of this handle, and especially by reason of its central position, and the manner in which the tool is attached to it, the tool can be rotated or slid vertically upon it. In respect to the sliding of the tool upon the rod, the movement is the same in both cases, the only difference is that in the Ewalt & Tillery, the rod is adapted to be held by the hand, while in the Barker, there does not appear to be any such provision.

30th Cross-Inter. Do I understand you that the mounting of the

apparatus is the same substantially, whilst holding the rod and sliding the tool vertically upon it?

Ans. I do not mean to say that the mounting is mechanically the same; I mean to say, that the parts may slide in relation to each other, in both tools alike.

31st Cross-Inter. You say there appears to be no provision in the Barker patent for holding the rod by the hand; I desire to call your attention to the following language in the original Barker patent: "The disk is then to be withdrawn and the rod D still pressed upon the lid," how would this rod D be pressed upon the lid unless by the hand?

Ans. It might press by its own weight.

32d Cross-Inter. I now call your attention to another part of the language, "the rod D is pushed down through the tool," how could it be pushed down through the tool unless pushed by the hand?

Ans. If the tool were held vertically, so that the word down would apply, it would drop by gravity.

33d Cross-Inter. Then if dropped it would not be pushed, would it?

Ans. The specification requires that the rod should pass through the disk, so as to allow it to slide up and down. That being the case, and the tool being held so as to permit a downward movement of the rod, it would ordinarily slide down by gravity,
259 but I can see by looking at the drawing, that it would be possible to take hold of the rod with the ends of the fingers, or by means of another tool, or by placing something against the the upper end of the rod to push it.

34th Cross-Inter. In one of your answers you stated, the rod might press by its own weight; does Barker limit himself to any weight of that rod?

Ans. I think he does not.

35th Cross-Inter. If the rod were made heavy enough, would it not be sufficient to answer every purpose by pressing with its own weight?

Ans. I suppose it would.

36th Cross-Inter. In answer to the 6th interrogatory you say, the Exhibit Ewalt & Tillery is an infringement of the first and second claims, or the terms of the claims, as they now stand in the Barker re-issued patent, and possibly of the fourth claim of the same patent. Why do you say possibly?

Ans. I had some doubt as to the effect of the clause in fourth claim "conforming in shape to the cap to be soldered." That might limit the claim to the annular tool, or annular shape of the face. If limited to that, it might not cover the Ewalt & Tillery apparatus; if not limited to the specific shape, I think it probably would include the Ewalt & Tillery apparatus.

37th Cross-Inter. Does the specific shape of a circular iron conform in shape to the cap to be soldered, if made with a recess in the

under side, to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover?

Ans. I think it would.

38th Cross-Inter. Would a soldering tool in the shape of a segment of a circle, made so, that it would give room in the inner side or wall of the tool for the convex lid of the can and confine the soldering process to the outer edge of the lid or cover, be also a tool conforming in shape to the cap to be soldered?

260 Ans. It would not be materially at variance with the terms, but I think the language is applicable to an annular tool, and not to a tool formed with an edge or face, curved to form the arc of a circle of the same diameter as that of the circular cap.

39th Cross-Inter. My question was, would such a tool conform in shape to the cap to be soldered?

Ans. It would partly but not entirely; it would be adapted to move exactly on a circular line on the edge of the cap, but it would not conform to the cap in shape, in the sense of being fitted to cover it or enclose it.

40th Cross-Inter. So far as conforming in shape to the cap is concerned, would there be any difference between a tool constructed like the one last described, and an entire circle, other than the difference between the amount or space of the edge of the cap covered in one case and in the other?

Ans. So far as I see, it would be a difference in amount of space covered, one tool melting all the solder at once, and the other requiring to be applied to the parts of the circle in succession.

41st Cross-Inter. Do I understand you then to mean, that the difference would be a difference in degree and not in kind?

Ans. I cannot say positively as to the practical effect of the difference, in the practical application of the tool; it would depend somewhat upon the question, whether the parts were used separately, or in combination with other parts.

42d Cross-Inter. As you have testified in answer to the third interrogatory-in-chief, that you considered yourself an expert in mechanical matters and patents relating thereto, excepting that you were not a practical mechanic, I have carefully refrained from asking you any practical mechanical question; my last question, therefore, related entirely to your opinion as an expert, upon the construction of the fourth claim of the Barker re-issued letters

261 patent; can you now answer my 41st cross-interrogatory, confining yourself to that branch of the case?

Ans. Leaving out of consideration possible differences in practical working, between a whole circle applied to the solder at once, and a segment of that applied in continuation, I should not say that there appeared to be a material difference.

43d Cross-Inter. In your answer upon the question of infringement, you have left out all allusion to the third and fifth claims of the Barker re-issue patent; what have you to say about those claims, beginning at the third?

Ans. The third is limited to the tool or die, with the rod D passing through said tool; I saw nothing of that construction in the Ewalt & Tillery Exhibit. The fifth claim in the Barker re-issue is limited, as I understand it, to the disk or tool A, with a recess B in its under side. I see nothing of this in the Ewalt & Tillery Exhibit.

44th Cross-Inter. Will you be good enough to take the Ewalt & Tillery Model in your hand, and separate the parts. Have you not now the rod in one hand and the tool in the other?

Ans. Yes.

45th Cross-Inter. Be kind enough now to put them together again. Have you not passed that rod through the tool?

Ans. It would not be accurate to say so.

46th Cross-Inter. Why not?

Ans. I have passed it through the handle.

47th Cross-Inter. In the operation of that tool must not the tool and the handle be one piece or practically so?

Ans. Yes, they must be firmly connected.

48th Cross-Inter. Suppose they were all made of one piece, would not the handle and all part and parcel of the tool?

Ans. It would be a part unboubtedly of the whole apparatus.

262 49th Cross-Inter. Is it not passed through for the purpose of holding the can cap or lid in the process of soldering?

Ans. I understand it so.

50th Cross-Inter. As you have given in one of your answers, the function of that recess to be to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover; is not the function of the hollow inner part of the Ewalt & Tillery tool the same?

Ans. I have not examined so carefully the Ewalt & Tillery description of that part, but I understand the shape to be for the same purpose—in whole or in part certainly.

51st Cross-Inter. Suppose the copper soldering iron, as shown in the Ewalt & Tillery iron, were made to form an entire circle, the inner part of that circle of precisely the same shape in continuation as that shown in the Ewalt & Tillery model; would that tool then be correctly described as having a recess to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover?

Ans. I think it would.

52d Cross-Inter. Would it be any the less so because it is part of a circle instead of a whole circle; or, in other words, would there be any other difference than a difference of degree?

Ans. I see none, unless, as I have before said, there be some difference in practice in the effect of one not in the other.

53d Cross-Inter. If it were constructed as above described, would the rod then pass through the tool or die?

Ans. It would.

54th Cross-Inter. Does it substantially pass through the tool or

die as it is, the differance being only one of degree and not of kind?

Ans. I cannot say that the practical effect would be precisely the same; theoretically, it may be so.

263 55th Cross-Inter. Is that tool, the Ewalt & Tillery Model, combined with and mounted upon an independently movable rod?

Ans. It is.

56th Cross-Inter. In answer to the sixth interrogatory-in-chief you say, I think, the first claim erroneously describes the device as a central pivotal rod, and what is called a central pivotal rod appears both from the original description and from the device shown and described in the patent to be a weight—referring to the Bostwick re-issue patent—does not the original patent call it a rod?

Ans. I think it does.

57th Cross-Inter. I call your attention to a portion of the second clause in the Bostwick original patent, when speaking of the iron as "being so extended and formed interiorly as to receive and embrace loosely a guiding rod;" did that language in the original patent escape your attention?

Ans. It did not.

58th Cross Inter. What does Mr. Bostwick say of Fig. 2 in his original patent?

Ans. He says it is an elevation of the guiding rod.

59th Cross-Inter. Is not the rod in the Ewalt & Tillery patent a guiding rod?

Ans. I think it is.

60th Cross-Inter. Is not the rod in the Bostwick patent a central rod?

Ans. Undoubtedly.

61st Cross-Inter. Is not the rod in the Ewalt & Tillery patent, when in use, a weight?

Ans. I think it was not so intended; undoubtedly it has weight.

62d Cross-Inter. If made heavy enough, would it not serve its purpose as a weight?

Ans. Undoubtedly.

63d Cross-Inter. If the rod in the Bostwick patent should not
264 be heavy enough of its own weight, is there anything in that patent that would prohibit the operator from putting his hand on the top of it?

Ans. I see nothing in the patent to prevent him from doing it.

64th Cross-Inter. You have said nothing about the second claim in the Bostwick patent; what was your view upon this claim in reference to the question of infringement?

Ans. The inventor confines himself specifically to a hollow iron, in combination with a separate and enclosed weight; I understand the claim as limited to the combination of the devices, which the inventor particularly specifies, and these devices I do not see in the Ewalt & Tillery Exhibit.

65th Cross-Inter. Is not the Ewalt & Tillery tool a hollow soldering iron in part, bearing the same relation to a hollow soldering iron in whole that a segment of a circle would have to a whole circle?

Ans. Taken alone, without regard to other parts, it might be.

66th Cross-Inter. What have the other parts to do with the shape of the soldering iron?

Ans. In the Ewalt & Tillery Exhibit one other part is a central pivot, about which the segmental iron is turned; in the Bostwick patent the other part is a weight, either round or square, over which, as I understand it, the soldering iron is to be placed, and which guides the soldering iron when it is thus placed over it. I do not see how it could be said to guide it if it were a segment.

67th Cross-Inter. Does not the rod in the Ewalt & Tillery iron guide it, and is not that a segment?

Ans. It does guide the iron as the segment is turned around it.

68th Cross-Inter. Does it not guide the iron as the tool slides up and down?

Ans. Yes, it does that also.

69th Cross-Inter. Supposing this soldering iron in the Ewalt & Tillery Model were continued in its same shape for three-
265 fourths of a circle, would it then be properly described as a hollow soldering iron?

Ans. I think it might.

70th Cross-Inter. Then at what part of a circle would this soldering iron begin to be a hollow soldering iron, and at what part of a circle would it cease to be such?

Ans. It must substantially enclose a space in order to be properly called a hollow iron.

71st Cross-Inter. Suppose I should cut off one-half of the Bostwick iron, and leave the iron in the shape of Fig. 2 in the Bostwick patent, would it make any difference in the terms and scope of the patented improvement as described by Bostwick?

Ans. It would not agree with his description.

72d Cross-Inter. Would a tool made like that infringe his claim?

Ans. I think it would not infringe the second claim, but it would be within the terms of the first.

73d Cross-Inter. Is the upper portion or handle of the Ewalt & Tillery iron "formed interiorly, so as to receive and embrace loosely a guiding rod, to be placed upon the cap to be soldered, to hold the latter down firmly until it has been secured by the solder, and at the same time guide the iron to its proper place, upon or against the rim or edge of the cap?"

Ans. Yes; it is.

74th Cross-Inter. What height and thickness does Bostwick in his original patent describe his soldering iron to be made?

Ans. I find no specific statement of the proportions of the parts, except that the cylinder is made thick to retain heat, and hollow to fit and enclose the projection of the cap to be soldered; the inner

diameter of the cylinder, at its lower end is to be somewhat greater than the external diameter of the cap; the rod is required to be in diameter about equal to that of the cap to be soldered.

266 75th Cross-Inter. To what thickness or height of the hollow soldering iron does Bostwick limit himself?

Ans. I find no limit stated, and no extent prescribed, except that it is to enclose the rod, and made thick so as to retain heat.

76th Cross-Inter. Look at the model now shown you, marked Complainant's Exhibit "Bostwick Spear," and state if that model is made in conformity to with the Bostwick patent?

Ans. The proportions are somewhat changed; the weight is represented in this exhibit as smaller in proportion to the thickness ot the cylindrical iron. I do not know that this would make any difference.

77th Cross-Inter. Be kind enough to read the specifications of the Bostwick patent, so that you may testify whether that model is not made in exact conformity with the description given in that patent?

Ans. The difference which I have pointed out exists between the exhibit and the drawings; the specification prescribes no limits, other than those I have heretofore stated, and unless this variation is such as to change the functions of the parts, it would not be material. I see no reason to suppose that it is a material variation.

Then adjourned to March 20th, 1880.

March 20th, 1880. Commission met; all counsel present. The cross-examination of the witness was then resumed.

78th Cross-Inter. Look at Defendant's Exhibit "Barker Record," and state, if you please, if you obtained that record from the Patent Office? (Objected to.)

Ans. I ordered it.

267 79th Cross-Inter. What was the character of the order you gave?

Ans. My recollection is that it was for the file-wrapper, and contents.

80th Cross-Inter. Did you give the same order for file-wrapper and contents in Defendants Exhibit "Bostwick Re-issue Record?"

Ans. I did; both were ordered in the same letter.

81st Cross-Inter. What should a file-wrapper and contents contain to be a complete record? (Objected to.)

Ans. All the original manuscript papers filed by the applicant in the case, copies of all the correspondence, record of all the actions of the Examiner, and the amendments and papers filed by the applicant or his attorney before the Examiner.

82d Cross-Inter. Suppose an appeal had been taken from the Examiner to the Board of Examiners-in-chief, would the decision of that board, upon the merits of the application, be a necessary part of a full record, or of the file-wrapper and contents? (Objected to.)

Ans. It would not be a part of the file-wrapper and contents, but would be recorded in a book kept by the board.

83d Cross-Inter. You have stated in your examination-in-chief, that another objection which you urged to the re-issue of the Barker Patent were the words "rotated about said rod;" were you aware that this very question had been submitted to the Board of Examiners-in-chief, on appeal from the primary Examiner, and after full discussion, had been determined by said Board of Examiners-in-chief?

Ans. I was.

Complainants counsel herewith files a certified copy of said decision, marked Complainants Exhibit "Board of Examiners."

268 84th Cross-Inter. What limitation does Mr. Bostwick place in his patent upon the length or height of the guiding rod?

Ans. He does not state what the length is. The length of the rod is not defined or limited in the original specifications.

85th Cross-Inter. I now submit to you a longer rod, and ask you if the material elements of the Bostwick patent are in any way changed by the introduction of this long rod, which is herewith filed, marked Complainants' Exhibit "Bostwick Long Rod?"

Ans. It might be; the long rod might perform a function not performed by the short one. I could not answer the question with certainty.

86th Cross-Inter. Please to state with what part of the Bostwick original or re-issue patent would the long rod interfere, as Bostwick himself describes his invention to be made?

Ans. The mere extension of the rod, all the outer parts remaining the same, would not take the apparatus out of the scope of the claims, which included it before the extension. Such an extension as would perform a new function would constitute an improvement, and make the apparatus to that extent a different apparatus.

87th Cross-Inter. Look at the first claim in the Bostwick re-issue patent, and state whether a long rod would perform any new or additional function other than that described in the first claim, or add any material element to the devices there in combination?

Ans. I am not able to say that it would.

88th Cross-Inter. Suppose this soldering disc or hollow cylinder were extended up to nearly the height of the long rod, would that still be within the combinations described in the Bostwick patent?

Ans. I cannot say certainly without practical experience in working the tool, but I do not see but that it would.

269 89th Cross-Inter. I will now place a piece of gas pipe, marked Complainants' Exhibit "Bostwick Extension," representing an extension of said hollow cylinder, in the top of Exhibit Bostwick Spear, and ask you if you think that would be within the claims and combinations of the Bostwick Patent?

Ans. The answer to the question involves, as it appears to me,

knowledge of the practical working of the thing, so that I cannot speak with confidence, but I am not prepared to say that it would be a material variation; it appears to be a construction not called for by the patent.

90th Cross-Inter. Suppose a party should make and construct a machine precisely like this, but instead of rotating or revolving the hollow cylinder by means of the horizontal handle, he should allow that handle still to remain in the machine, and revolve the hollow cylinder over the solder by placing his hand upon the top of the extension tube, as I am now doing, could such a party hope to escape the charge of infringement of the Bostwick claims?

Ans. It would depend wholly upon the result, if by what appears to me to be a reorganization of the machine, he accomplished a different result, it would be a different machine, but if the practical results were substantially the same then I think it might be an infringement of the patent.

91st Cross-Inter. What are the practical results sought to be attained by Mr. Bostwick in his patent?

Ans. The soldering of caps upon cans.

92d Cross-Inter. Taking the result to be attained by the Bostwick Patent, the soldering of caps on cans, by means of the devices in combination, as shown in his claims; I now repeat to you the 90th Cross-Interrogatory?

Ans. If both practically accomplished the same result, he could not.

93d Cross-Inter. Suppose I now take out the horizontal handle, and repeat to you the 90th Cross-Interrogatory?

270 Ans. I should give the same answer, but the device is so changed that I should anticipate a different result.

94th Cross-Inter. What different result would you anticipate?

Ans. It appears to be organized now for rotating about the central rod, whereas before and as described in the original patent it appeared to be simply designed to be placed down over the rod, directly upon the solder, without any reference at all to the turning.

95th Cross-Inter. Was it not just as capable of being turned or rotated before as it is now?

Ans. When it was made round, as shown in the drawing, and provided with a handle on the side, it was capable of partial turning, but it would be inconvenient for anything more than slight oscillation back and forth.

96th Cross-Inter. Is not this apparatus as it now stands, with the extension tube and the long rod, and without the horizontal handle, just as capable of being held upon the solder without rotation as it was before the horizontal handle was taken out?

Ans. I should think so.

97th Cross-Inter. Could a party, then, seek to escape the charge of infringement of the Bostwick Hatent who made a tool in that shape and used it in that way?

(Objected to, because it involves a question of law, and because the machine now inquired about is not in controversy.)

Ans. If he had made a tool, by the changes which have been stated, capable of a different use or accomplishing a different result, it would not be an infringement of the patent; but if he used it in that way—that way being the only way in which it was capable of being used—that is, the result being substantially the same, it would be an infringement.

271 98th Cross-Inter. Suppose the result in both cases to be the soldering of a cap on a can, what would you say in that event?

Ans. The result being the same in the soldering, I should say it would be an infringement.

99th Cross-Inter. Suppose, now, I should cut off a half section of that cylinder, leaving a semi-circular soldering edge, would the result be the same in that case, viz., the soldering a cap on a can?

Ans. One half of the soldering iron being removed, and the handle changed as is now supposed, and the soldering iron made round so that it could be rotated, the result might be the same. In the construction shown in the patent, with the side handle adapted to slight oscillation, I think the result would not be the same.

100th Cross-Inter. Do you mean the result, or the means of accomplishing the result would not be the same?

Ans. I mean the result.

101st Cross-Inter. Would not the result in both cases be the soldering the cap on the can?

Ans. I do not see how the apparatus, with the changes now specified, but retaining the side handle, could be made to melt the solder in all the parts without great inconvenience, the iron covering but part of the solder. When the ring was entire it could be placed down upon the solder and melt the whole without the necessity of turning, but, only half being used, it is not clear to me how it could be conveniently applied to the whole.

102d Cross-Inter. I now replace the side handle, and supposing this hollow cylinder to be cut off to the shape of a semi-circle, ask you to look at me whilst I revolve the iron, and say whether I make the revolution, so that the semi-circle edge would touch on every part of the solder, and whether I do it without inconvenience?

(Counsel for complainants rests his left hand upon the top of the rod.

272 Ans. You do so make the semi-circular edge touch in all its parts, but I should say with great inconvenience.

103d Cross-Inter. I now remove the side handle, leaving the apparatus as it was before, with the extension in the top of the disk and the long rod; I now take out the long rod, place the hollow cylinder over the cap of the can, and turning the long rod upside down, reinsert it in its place, with the smaller end of the rod resting upon the can, and I ask you whether a party who had made

this alteration would seek to escape the charge of infringement of the Bostwick patent, supposing the result to be the soldering a cap on a can?

Ans. If he had done no more than simply invert the rod, remove the handle and add the tube, it might still be within the scope of the patent, but the apparatus as a whole is now so changed that I should very greatly hesitate to say that it is still within the scope of the patent; it involves as changed something which is not contemplated by the patent, viz: That the iron should be placed upon the solder first, and then the rod be inserted; in the patent the rod shown is capable of being placed on the cap, and maintaining itself in position by gravity, and then it seems capable, as the patent describes, of having the soldering iron placed over it, and of guiding the iron down to the solder.

104th Cross-Inter. Will you be good enough to look at me again and see if I do not place the rod on the cap first, and then slide the iron down over the rod to its place on the solder?

Ans. Yes; with this limitation, as to the expression, "sliding the iron down the rod to the solder," the iron was first passed up the rod and then returned; that did not occur to me in answering the previous question.

105th Cross-Inter. Have I not in that tool as it stands a rod or weight and a hollow cylinder or a soldering iron?

A. Yes.

106th Cross-Inter. Is that iron as it now stands "made with
273 an enclosing edge of the dimensions and form of the rim or edge of the cap or piece to be soldered, so as to conform thereto when placed thereon?"

Ans. I understood it to be so.

107th Cross-Inter. Is that iron as it now stands, so extended and formed interiorly, as to receive and embrace loosely a guiding rod, to be placed upon the cap to be soldered, to hold the latter down firmly until it has been secured by the solder?

Ans. It certainly has a soldering iron conforming with the cap, formed interiorly to receive and embrace a rod, which is adapted to press upon a cap, and hold it down. I think too that the rod would serve to hold the cap down, when the iron was lifted clear from the solder. Whether it would guide the iron accurately of itself in its way down, I am not at all sure.

108th Cross-Inter. In answer to the 8th interrogatory-in-chief, you have stated that you thought the Ewalt & Tillery device patentable, notwithstanding the prior devices of Barker and Bostwick; I now hand to you three patents, filed in this cause, and marked Defendants' Exhibit Tillery No. 1, 2, and 3, No. 1 and 3 having been granted to Jno. A. Tillery and Samuel A. Ewalt, of Balto., and No. 2 to John A. Tillery, and state if you please, beginning with No. 1, what it is that Ewalt & Tillery claim patents for?

(Objected to, because the patents speak for themselves, and because the witness was not examined-in-chief on these patents.)

Ans. No. 1 covers in the first claim, a combination of a solder-tool, a rotary shaft, by which this tool is made to revolve around the axis of said shaft, and what is called a "stock," by means of which the tool is held upon the shaft, and made adjustable to or from the shaft. The second claim in the same patent is limited to a bifurcated handle and gearing, by means of which the tool is caused to revolve, combined with said tool and a spring rest.

274 109th Cross-Inter. Is there any device or combination of devices claimed in that patent which are covered by the specifications and claims of the Barker and Bostwick patents?

Ans. I should think that the patent shows a soldering tool revolving about a central rod, which is adapted to rest upon the centre of the cap, and that the combination would be included in some of the claims of the re-issued patents specified.

110th Cross-Inter. I did not ask you what he described, but whether he claimed and pointed out as new in his patent anything covered by the Barker and Bostwick patents?

Ans. I should think not.

111th Cross-Inter. Answer the same question, after stating what the claims are for in No. 2, without regard to the entire apparatus therein described.

Ans. The claim is for a centering tool for soldering irons, provided with a longitudinal perforation in the end, which bears upon the cap, and a transverse perforation communicating therewith—the perforations forming a vent by which the air and steam can escape from the can. That is not in either of the patents specified.

112th Cross-Inter. Answer the same question with reference to No. 3.

Ans. In patent No. 3 the first claim is for a soldering tool connected to the handle by a pivot, by means of which it may be adjusted towards or from the cap holder. The second claim is limited to a loop, provided with a screw shank in combination with the devices of the first claim, by means of which the tool may be held within certain limits of adjustment. I do not find either of these combinations in the Barker or Bostwick patents.

113th Cross-Inter. I understand you, then, to say that whatever may be the descriptiens contained in these Ewalt & Tillery patents of the mode of operation on which their tool is worked, they do not point out as new matter or attempt to claim in their patents any of the devices or combinations claimed in the Barker or Bostwick patents?

275 Ans. I do say so. They claim nothing of what is shown or claimed in the Barker or Bostwick patents.

114th Cross-Inter. What is the practice of the office in granting patents to parties, who describe in their specifications, matters that are old or are covered by other patents, supposing at the same time he discribes something that is new? (Objected to.)

Ans. The description of what is old would not be regarded, unless it tended to render the claims broader than they should be,

or was unnecessary to the description of the invention claimed; if the old elements described were a part of the machine improved by the applicant, and were necessary to illustrate his invention, it would be not only allowed to remain in the specification, but would be required.

115th Cross-Inter. In that case, I understand you, that the description would be allowed to stand, but the claims in his patent would be so limited as to embrace and point out only that which was new?

Ans. That is correct.

116th Cross-Inter. I now hand you Defendants' Exhibit "William Foust"—which is described on the face of the certificate to be "a true copy from the files in this office, of the specification and drawing in the matter of the application of William Foust"—did you give the order for this paper?

Ans. I did

117th Cross-Inter. Is that paper a full record or only a part?

Ans. It is only the specification and drawing.

118th Cross-Inter. Did you know that that application of Foust was rejected?

Ans. I did.

119th Cross-Inter. Would a full record of the case contain the rejection of this application?

Ans. The file-wrapper and contents would include the letter of the Examiner, stating the reference or reason of the rejection.

276 120th Cross-Inter. I had always understood that rejected applications were placed among the secret archives of the department, and that copies thereof could not be obtained from the Patent Office; am I wrong in this?

Ans. Yes, to this extent: The practice is where rejected applications have been referred to in the files pertaining to patents, which are in litigation, copies may be furnished of such applications as a part of the record, and until within a few years rejected applications were cited as references.

121st Cross-Inter. Has not the practice been changed only since the decision of the Supreme Court in the case of Brown against Guild, or what is more popularly known as the "Corn Planter Case?"

Ans. Only since that decision, as to citing rejected cases as references.

Re-direct examination by Mr. BROWN:

1st Re-direct Interrogatory. Suppose the model "Bostwick Spear," with the extension "Bostwick Extension," had been patented as a tool to work in combination with "Bostwick Long Rod," with the large end to rest upon the cap; suppose, for mechanical reasons, the tool as constructed and patented, could not be used to cap a can securely, would it or not be an infringement upon such a patent if a person should invert that rod so that the small end rest

upon the cap, if in so reversing it the tool could be used to cap a can securely?

Answer. If the reversing of the rod were a change in the organization, making that operative which had before been inoperative, I should say that that amounted to a different machine; a patent for an inoperative machine would not cover it.

2d Re-direct Inter. Look at the soldering iron as it now contains the inverted rod, and state whether or not the soldering iron embraces loosely the rod?

Ans. It does.

277 3d Re-direct Inter. Does the soldering iron proper touch the rod at all?

Ans. It does in the upper part of the extension tube only.

4th Re-direct Inter. Suppose that a hollow soldering iron has been in common use, and that a weight or rod to hold the cap during the process of capping has been in common use, what if anything is patentable when you use the two in combination, unless a new result is obtained. (Objected to as a question of law.)

Ans. Some construction in the combination of the two devices which would produce a new result, and not merely the sum or aggregation of the devices used separately.

Counsel for defendants here file the following exhibit, marked Defendants Exhibit "Assignment No. 2." (Objected to as having nothing to do with the case, but not because it is not certified.) Also, Exhibit "Samuel Carson" and Exhibit "George J. Stone." (Objected to, but not for want of notice.)

ELLIS SPEAR.

Subscribed and sworn to before me, this 20th day of March, 1880.

ISAAC BROOKS, JR., *Examiner.*

Albert D. Brooks.

No objection to this witness for want of notice.

ALBERT D. BROOKS, a witness produced in behalf of the defendants, after being duly sworn, deposes and says, as follows:

1st Interrogatory. State your name, age, residence, and occupation.

278 Answer. My name is Albert D. Brooks, I am thirty-five years of age; I reside in Baltimore; I am a can maker and capper.

2d Inter. Where were you employed in 1863 and 1864?

Ans. In 1863, I was with my brother, Samuel Brooks; in the summer of 1864, I worked for Pearce & Hoff, on Calvert street.

3d Inter. Do you know a colored man named Charles E. Hall, who worked there, and if so, how long have you known him?

Ans. I do, since 1864.

4th Inter. State what, if anything you know, of a soldering iron used by him at Pearce & Huff's?

Ans. He showed me a soldering iron there in the summer of 1864; I think he had two irons together; I know he had something around, I can't say whether it was a piece of iron or a piece of wood, that he used to hold the cap down.

ALBERT D. BROOKS.

No cross-examination.

Subscribed and sworn to before me, this 20th day of March, 1880.

ISAAC BROOKS, JR., *Examiner.*

Henry C. Waldman.

(No objection to this witness for want of notice.)

HENRY C. WALDMAN, a witness produced on behalf of the defendants, after being duly sworn, deposes and says as follows:

1st Interrogatory. State your name, ago, residence, and occupation?

279 Ans. My name is Henry C. Waldman; I am twenty-eight; I reside in Baltimore; I am at the present time a sign writer. In 1863, I worked in the can factory of Burris & Miller.

2d Inter. Are you or not acquainted with James H. Burris, and if so, how long have you known him?

Ans. I am; I have known him for almost twenty-five years; we were raised together; his father raised me.

3d Inter. What, if anything, do you know about a soldering machine used by James H. Burris, in 1863 or 1864?

Ans. I know that he borrowed a brace belonging to his father, for the purpose of making a machine of some kind, to use in soldering caps on cans. I also remember taking cans in his shop for the purpose of being capped.

No cross-examination.

HENRY C. WALDMAN.

Subscribed and sworn to before me, this 20th day of March, 1880.

ISAAC BROOKS, JR., *Examiner.*

D. D. Mallory.—Re-called.

1st Interrogatory. When you employed counsel to defend this case, to whom, if any persons, did you refer them for information as to witnesses, &c.? (Objected to.)

Answer. I referred them to both Tillery and Ewalt.

2d Inter. What request, if any, did you make of Tillery & Ewalt? (Objected to.)

Ans. I wished them to assist the counsel in working up the case.

3d Inter. What promise, if any, did they make in response to your request? (Objected to.)

280 Ans. They stated at different times that they were hunting up witnesses, Tillery particularly.

4th Inter. Did they or not promise to see your counsel with reference to the matter? (Objected to.)

Ans. Tillery did so; I have no recollection of Ewalt doing so.

5th Inter. Look at the letters and envelopes now shown you, and state in whose handwriting they are. (Objected to.)

Ans. I should say it was John A. Tillery's.

6th Inter. Are you or not acquainted with his handwriting? (Objected to.)

Ans. I have seen it frequently; I think I am acquainted with his handwriting.

Counsel for defendants herewith files Defendants' Exhibits Tillery Letters No. 1 and 2, and Tillery Envelope No. 1 and 2.

Defendants Exhibit Tillery Envelope No. 1, filed March 19th, 1880.

ISAAC BROOKS, JR., *Examiner.*

Postmark: White Stone, Va., February 17th.

Mr. Jno. L. Fritz, Esq.,
Care Lineweaver & Co.,
128 Light street,
Baltimore, Md.

Postmark: Baltimore, Md., February 18th, 11 a. m.

Defendants Exhibit Tillery Letter No. 1, filed March 19th, 1880.

ISAAC BROOKS, JR., *Examiner.*

281 JAN. 14TH, 1880.

Mr. JNO. L. FRITZ, Esqr.,

DEAR SIR: your letter of the 5th inst. is Just this day reached me, and contents noted; and in reply will Say if you Can Keep out of the way, do so until you se me, which will be in a few days, as I will explain all to you; you Need Not appair if you dont get the Sumonds your Self, and you can post your wife if eny one Comes at the house after you, for her not to tell ware you work, and when you se Me you will say it is a good days work for you, and you will Se I am a true friend to you; So I will close by Saying, I hope this letter will find you and all of your family well, So please right and let Me No if you got this all right. Please excuse this righting, as it was rote in a big hurry.

receive My Best wishes for your welfare.

Your humble Sirvent,

JNO. A. TILLERY,

Kilmounick, Lancaster County, Va.

Defendant's Exhibit Tillery Envelope No. 2, filed March 19th, 1880.

ISAAC BROOKS, *Examiner.*

Postmark: Kilmounick, Va., 1 ——— 10th, 1880.

Mr. Jno. Fritz, Esq.,
Care Lineweaver & Co.,
Can Factory,
Cor. Light and Conaway Sts.,
Baltimore, Md.

if not cald for in 10 days, please return to J. A. T., Kilmounick, Lancaster Co., Va.

Postmark: Baltimore, Md., Jan. 14th, 4. p. m.

282 Defendants Exhibit Tillery Letter No. 2, filed March 19th, 1882.

ISAAC BROOKS, JR., *Examiner.*

KILMONICK, LANCASTER CO., VA., *Jan. 7th*, 1880.

Mr. JNO. FRITZ, Esq.

DEAR SIR: with pleasure I right you these few lines, hoping they may find well and with plenty of work, also to aske of you, if cald on in the triel, for you to say you Never Saw the Ewalt and Tillery Iron until 1872, as I want lang to win, also I will tell you in a Short wile, I will have things So you and Myself will make an easy living; I left as I do Not want to be a witness against lang, and if they Catch you, all you have to say is, you never Saw the Ewalt & Tillery Iron until 1872, so I want you to right as soon as you get this, and let Me No all the News, and I will Come right on; So I will close by saying, receive my best wishes for your welfair.

Truly your friend, JNO. A. TILLERY,
Kilmarnock, Lancaster Co., Va.

P. S.—please excuse writing, as I am hurried. J. A. T.
answer as soon as you read it

Cross-examined by Mr. PRICE:

1st Crost-Interrogatory. When and how did you obtain the letters marked Tillery Letters No. 1 and 2?

Answer. I could not give you the exact date; I should think the last of January, or the first of February, as near as I can remember. I received them from Barney Kegan.

2d Cross-Inter. State who Earney Kegan is, and in whose employ he has been since the beginning of this suit.

Ans. He is a processor, and an employee of D. D. Mallory & Co.

3d Cross-Inter. What has he been doing since you began taking testimony in this suit?

283 Ans. Assisting in getting witnesses together.

4th Cross-Inter. Has he also been getting up models of different apparatuses filed in this suit?

Ans. I have never known of his getting up any.

5th Cross-Inter. How did Barney Kegan obtain these letters which you have filed in evidence?

Ans. This man Fritz' name was given to us by Tillery as a witness. Kegan went to see him for the purpose of seeing if what Tillery told him was true, and Fritz told him that he could not swear to what he had agreed to with Tillery, without perjuring himself. Fritz' wife said that Tillery was writing to her husband, and showed him the letters. He asked her to give them to him and she did so.

6th Cross-Inter. Was Fritz present when he obtained these letters from his wife?

Ans. He was present during some of the conversation, whether he was present when the letters were given I could not say.

7th Cross-Inter. What was it that Fritz could not swear to without perjuring himself?

Ans. What Mr. Tillery requested him, as I understand it, in relation to the capping iron.

8th Cross-Inter. What was it that Tillery requested him to swear to?

Ans. I could not answer that question.

9th Cross-Inter. What was your object in filing these letters? (Objected to.)

Ans. My object was to show, that in the start Tillery was working on our side of the case. From the tenor of those letters, it would indicate that he was working on the other side.

10th Cross-Inter. When was the Ewalt & Tillery iron gotten up? (Objected to.)

Witness asks, what was the date of the patent, and then says in answer:

284 It was during the winter of 1871 and 1872.

11th Cross-Inter. I see in one of these letters Mr. Fritz is requested, if called on in the trial, to say he never saw the Ewart & Tillery iron until 1872; does that request him to say anything more than what is strictly true?

Ans. I could not say. He may have seen it in 1871.

12th Cross-Inter. Suppose he had seen it in 1871, what difference would that make in your case? (Objected to.)

Ans. I don't know of any.

13th Cross-Inter. Since you obtained these letters you have not repeatedly urged Tillery to assign you his interests in the patents, and also to testify for you in this case?

Ans. I have asked him to assign the interest in the patents. I have not asked him to testify for us in our case. I told him repeatedly that we did not want him to testify.

14th Cross-Inter. Look at the letter now shown you, marked Complainants' Exhibit Mallory Letter No. 1, and state if it is in your handwriting?

Ans. It is not.

Complainants Exhibit Mallory Letter No. 1, filed March 20th, 1880.

ISAAC BROOKS, JR., *Examiner.*

BALTIMORE, *Jan.* 23, 1880.

JOHN A. TILLERY, Esq., *Harvey's Wharf.*

SIR: Would like you to come to Baltimore at your earliest convenience.

Yours, &c., D. D. MALLORY.

15th Cross-Inter. In whose handwriting is it?

Ans. It looks like Mr. Freeman's; he is in our employ as confidential clerk.

16th Cross-Inter. Was that letter written by your authority?

285 Ans. It likely may have been.

17th Cross-Inter. What was your object in sending for Tillery at that time?

Ans. To get him to assign the interest in the patents to me.

18th Cross-Inter. What inducement did you offer to Mr. Tillery to come up and testify in your behalf?

Ans. Not any, whatever; I did not wish him to testify in my behalf.

19th Cross-Inter. Look at letter dated Feb. 7th, and state if that is in your handwriting. It is herewith filed, marked Complainants' Exhibit Mallory Letter No. 2.

Ans. It is.

Complainants' Exhibit Mallory Letter No. 2, filed March 20th, 1880.

ISAAC BROOKS, JR., *Examiner.*

BALTIMORE, *Feb. 7th*, 1880.

MR. JOHN TILLERY:

DEAR SIR: Report here says that you have sold yourself to Lang; we intend to go on with the suit, and expect to win it whether you testify or not.

If you do not choose to sign your interest in the iron to me, it makes no difference; I have *your receipt* and *witness* that I bought your *entire interest in the iron.*

If you wish to come up and tell the truth like a man, I shall give you the one-third interest in the iron—if you wish to remain away, you can do so.

You need not have any fears of my sending any officer for you, as

I shall not do it; you can act your own pleasure about coming or staying.

Yours, &c., D. D. MALLORY.

20th Cross-Inter. If you did not wish Tillery to testify, and told him repeatedly that you did not want him to do so,
286 what do you mean by the following clause in your letter: "If you wish to come up and tell the truth like a man, I shall give you the one-third interest in the iron?"

Ans. Tillery had represented that he had valuable witnesses that he could produce to show that he had invented this iron, many years previous to its being patented, and at the commencement of this suit I promised to give him back one-third interest in the iron if he would assist to work up the case and get the witnesses together.

21st Cross-Inter. That is what you mean in asking Tillery to come up and tell the truth?

Ans. I intended to convey the idea that I would carry out my promise if he would come up and testify to the truth; that is, not to testify, but to tell the truth and not deceive the other side.

22d Cross-Inter. What do you mean in the same letter by saying, "We intend to go on with the suit, and expect to win, whether you testify or not?

Ans. I wanted to convey the idea that we were not depending on him as a witness.

23d Cross-Inter. Look at the following letter now shown you, dated Feb. 18th, 1880, herewith filed, marked Complainants' Exhibit Mallory Letter No. 3, and state whether that is in your handwriting?

Ans. It is.

Complainants' Exhibit Mallory Letter No. 3, filed March 20th, 1880.

ISAAC BROOKS, JR., *Examiner*.

BALTIMORE, *Feb.* 1880.

Mr. JOHN A. TILLERY.

DEAR SIR: In reply to yours of the 14th, you can come or stay, just as *you choose;* I shall not send for you; and if you come, you need not take the stand if you do not wish to do so; we have plenty of evidence without yours to win the case.

287 If you come, I can tell you something that would be to your advantage to know, and would perchance change your mode of thinking; don't you for one moment think that Lang will win the case, for we have no such idea; and if you know what I do, you would not think so; we have the best of proof, that goes back of anything that they, Lang & Co., has.

So you can come, or remain in Virginia, as you may choose, we have witnesses enough without you, but it would be to *your advantage* if you come up.

24th Cross-Inter. What do you mean by saying in that letter, "if you come, you need not take the stand if you do not wish to do so?

Ans. I had heard that Tillery had said, that he was staying away from town, so as not to be called as a witness in the case, and, I wrote him this, because I wished to show him that we did not wish to put him on the stand.

25th Cross-Inter. What do you mean by telling him, "if you come, I can tell you something that would be to your advantage to know, and would perchance change your mode of thinking?"

Ans. I meant that we had found additional evidence in the case, and as he was the original inventor of the iron, I intended to give him a one-third interest, if he would not deceive the other side.

26th Cross-Inter. You had already told him that, as you have just testified—what was there particularly to his advantage to know, that you proposed to tell him?

Ans. Nothing but the additional evidence that we had.

27th Cross-Inter. What was that additional evidence. (Objected to.)

Ans. In the shape of different irons that we had found since he had left.

28th Cross-Inter. What other inducements, if any, did you offer to Tillery, to come up and testify in this case?

Ans. Not any.

288 29th Cross-Inter. Did you make arrangements to procure an interest for him in the firm of Grillett & Mann, or in any other business?

Ans. I did not.

30th Cross-Inter. Did not tell him that you had done so?

Ans. I did not.

31st Cross-Inter. Did not Tillery tell you repeatedly that he had searched everywhere, and could find nothing to go behind the complainants' iron?

Ans. He did not; he told me that he had one in his possession, at his house in Virginia that would do it.

32d Cross-Inter. Did you not instruct him to get up anything, or bring anybody, that would defeat the suit of the complainants?

Ans. I did not.

33d Cross-Inter. Did he not tell you that to swear that he had seen anything behind complainants' patent, would be to perjure himself?

Ans. He did not, but has always said that he had an iron at his house in Virginia that would antedate it, manufactured by himself.

34th Cross-Inter. Did you not send Tillery to Mr. McMurray, and instruct him to tell Mr. McMurray that he had something away back behind complainants' patent, which he proposed to bring in evidence, for the purpose of frightening McMurray into a compromise or abandonment of the suit?

Ans. I did not.

35th Cross-Inter. Did you instruct him to get up this iron which I now show you; it is herewith filed, marked Complainants' Exhibit Mallory No. 4?

Ans. I did not; I don't know that I ever saw it before, or one like it.

36th Cross-Inter. Who paid for the making of it?

Ans. I could not tell.

289 37th Cross-Inter. Did you not know that Tillery's visit to Mr. McMurray was unsuccessful, and Mr. Murray refused positively to listen to anything, and did you not then tell Tillery to work on Lang and see what could be done with him?

Ans. I did not know whether it was unsuccessful or not; I knew nothing about his visit; Tillery told me at the first commencement of the suit that he would see Mr. Lang when he came into town, in relation to the compromise.

38th Cross-Inter. Look at paper now shown you, and state whether you wrote that telegram for Tillery to copy; it is herewith filed, marked Complainants' Exhibit Mallory No. 5.

Ans. I may have done so; I cannot state positively; if so, it was at his request.

Complainants' Exhibit Mallory No. 5, filed March 20th, 1880.
ISAAC BROOKS, JR., *Examiner.*

THE WESTERN UNION TELEGRAPH COMPANY.

272. Dated Baltimore, Md., 1879.
Received at Portland, Maine, Nov. 20.

To E. M. LANG:

I go to work for Mallory, Monday, if I do not see you before then.
JOHN A. TILLERY.

15 p'd. H'f rate.

39th Cross-Inter. What do you mean by saying "I go to work for Mallory, if I do not see you before then;" was not the object of that to bring Lang on?

Ans. At that time Tillery wanted me to give him employment, and he wanted first to get an answer from Lang of some ar-

290 rangements they had; he stated that Lang had written him that he was coming on, and he wanted to see him, or get an answer from him before he went to work.

40th Cross-Inter. Did you not inquire of Tillery, every morning after that telegram had been sent, if he had heard from Lang?

Ans. I did not; I did not see him every morning.

41st Cross-Inter. Did you instruct him to watch the newspapers to see if Lang had arrived in town, and to be careful to see Lang, before Lang could see McMurray or anybody else?

Ans. I have no recollection of giving any such instructions.

42d Cross-Inter. Did you ever write anything else to Lang for Tillery to copy?

Ans. I may have done so.

43d Cross-Inter. Look at this letter, herewith filed, marked Complainants Exhibit Mallory Letter No. 6, and state whether you wrote the original of that letter for Tillery to copy? (Objected to.)

Ans. I may have done so.

Complainants Exhibit Mallory Letter No. 6, filed March 20th, 1880.

ISAAC BROOKS, JR., *Examiner.*

BALTO., *Nov. 26th*, 1879.

MR. E. M. LANG, Esq'r.

DEAR SIR: I telegraphed you last week that I Should go To work for Mr. Mallory This week, if I did Not se you, but have Not done So yet, as ewalt tells Me you will Make it all right with Me for the time that I loose, I cant afford to loose Much time here and do nothing, and I have Something I would like to say to you, and dont like to tell enyone elce, and would like to se you before you se eny one here, and think it for your interest for Me to do so; I would come on and se you if I had the Money to Come with, and I
291 dont want to aske Mr. Mallory for eny thing or favors untill I se you, so please let Me here from you soon, and Know what I am to do.

So I close by saying, give my best wishes to your family and self.

True friend, JNO. A. TILLERY.

44th Cross-Inter. Was not this letter intended to entrap Lang, and bring him on to Baltimore?

Ans. I had no such intention.

45th Cross-Inter. What is the meaning of the clause, "I would come on and see you, if I had the money to come with, and I don't want to ask Mr. Mallory for anything or favors until I see you?"

Ans. I could not answer that.

46th Cross-Inter. Did you not tell Tillery at the time to put that clause in, because Lang would know that you had the money to send him on, if you wished, and he had better tell Lang that he did not want to ask any favors of you?

Ans. I did not.

47th Cross-Inter. How often did you send for Tillery at his farm to come up here, and who did you send, whilst the evidence in the case was progressing?

Ans. I sent Mr. Robinson once and Mr. Row once; my object was to have him sign the papers assigning the patent; I did not care whether he did it there or come up here to do it.

48th Cross-Inter. Did Tillery refuse to sign your papers or not?

Ans. He did.

49th Cross-Inter. Did you send any money down, or anyone authorized to pay money, for signing those papers?

Ans. When Mr. Robinson went down he stated that Mr. Tillery wanted to borrow two hundred dollars from me; he had no money with him at the time, and I then I sent Mr. Row down and

292 gave him two hundred dollars; instructed him to loan it to Mr. Tillery, on conditions of Tillery's assigning the patents to me.

50th Cross-Inter. Did Tillery still refuse to sign these papers?

Ans. At that time he did.

51st Cross-Inter. Has he ever signed them?

Ans. He has not.

52d Cross-Inter. Have you not brought suit against him, in Richmond, for the purpose of forcing him to convey this interest to you, and enjoining him from conveying it to anybody else?

Ans. I have.

(Complainants herewith file Complainants' Exhibit Mallory Nos. 7 and 8.)

53d Cross-Inter. Why did you not bring suit against him in Baltimore?

Ans. I did not know that he was in Baltimore when I sued him.

54th Cross-Inter. You had his letters in your possession which were obtained from Fritz; did you not know by those that he would soon be in Baltimore?

Ans. I knew that they said so.

55th Cross-Inter. Did you see him after he came to Baltimore?

Ans. I think I did.

56th Cross-Inter. Did you tell him anything about the suit in Richmond?

Ans. I have no recollection of doing so.

57th Cross-Inter. Did you know that process was served at his farm whilst he himself was present here in Baltimore?

Ans. I did not. I supposed it was served on him before he came up.

58th Cross-Inter. What was your object in not mentioning to Tillery anything in relation to this suit whilst he was in Baltimore?

292*a* *Complainants' Exhibit "Mallory No. 7."—Chancery Subpœna.*

UNITED STATES OF AMERICA, } *ss:*
Eastern District of Virginia, }

The President of the United States of America to John A. Tillery, of Northumberland co., Va., Greeting:

We command you, and every one of you, that you appear before our judges of our circuit court of the United States of America for the eastern district of Virginia, at the court room in the custom house in the city of Richmond, in said district, on the last Monday in the month of March next, to answer the bill of complaint of Dwight D. Mallory, a citizen of the State of Maryland, this day filed in the clerk's office of said court in said city of Richmond, then and there to receive and abide by such judgment and decree as shall then or thereafter be made, upon pain of judgment being pronounced against you by default.

To the marshal of the eastern dist. of Virginia to execute.

Witness the Hon. Morrison R. Waite, Chief Justice of the Supreme Court of the United States of America, at Richmond
292*b* aforesaid, this 4th day of March, in the year of our Lord one thousand eight hundred and eighty, and of our Independence the 104th.

[SEAL.] M. F. PLEASANTS, *Clerk.*

Memorandum.

The above-named defendant is notified that unless he enters his appearance in the clerk's office of said court, at Richmond aforesaid, on or before the day to which the above writ is returnable, the complaint will be taken against him as confessed, and a decree entered accordingly.

M. F. PLEASANTS, *Clerk.*

293*a* *Complainants Exhibit "Mallory No. 8."*

Injunction Writ.

CIRCUIT COURT OF THE UNITED STATES OF AMERICA, *Eastern District of Virginia*, } *ss:*

UNITED STATES OF AMERICA.

To John A. Tillery, and to your counsellors, attorneys, solicitors, trustees, and agents, and to each and every of them, Greeting:

Whereas it hath been represented to the judges of our circuit court of the United States for the eastern district of Virginia, in chancery sitting, on the part of Dwight D. Mallory, complainant, in a certain bill of complaint exhibited in our said circuit court, on the chancery side thereof, before the judges of said court, against you, the said John A. Tillery, to be relieved touching the matters complained of. In which said bill it is stated, among other things, that you are combining and confederating with others to injure the complainant, touching the matters set forth in the said bill, and that your actings and doings in the premises are contrary to equity and good conscience. And it being ordered that a writ of injunction issue out of said court, upon said bill, enjoining and restraining you, and each of you, as prayed for in said bill:

293*b* We therefore, in consideration thereof, and of the particular matters in said bill set forth, do strictly command you, the said John A. Tillery, your counsellors, attorneys, solicitors, trustees, and agents, and each and every of you, that you do absolutely desist and refrain from assigning, selling, mortgaging, and interfering with the patents for improvements in soldering tools, numbered 126,852, 127,119, and 127,120, dated respectively the 14th day of May, 1872, and the 21st day of May, 1872, granted by the United States to John A. Tillery and Samuel A. Ewalt, mentioned in said bill of complaint, and from granting a license to any

person to use the improved soldering tools covered by said patents, until this honorable court, in chancery sitting, shall make other order to the contrary. Hereof fail not, under the penalty of what the law directs.

To the marshal of the eastern district of Virginia, to execute and return in due form of law.

Witness the Hon. M. R. Waite, Chief Justice of the Supreme Court of the United States of America, at Richmond aforesaid, this 9th day of March, in the year of our Lord one thousand eight hundred and eighty, and of our Independence the 104th year.

[SEAL.] M. F. PLEASANTS, *Clerk.*

293*c* Ans. I supposed he was already aware of it.

59th Cross-Inter. You have stated in your former testimony, given in this case, that you had no recollection of any notice having been given to your firm, that the Ewalt & Tillery Iron was an infringement upon any other patent; look at the letter-press copy I now show you, marked Complainant's Exhibit Mallory Notice No. 9, and state now whether you have any recollection of ever having received the letter, of which this is a copy?

Ans. I have no recollection of ever having received the letter.

Complainant's Exhibit Mallory Notice No. 9, filed March 20th, 1880.

ISAAC BROOKS, JR., *Examiner.*

PORTLAND, 23 *March*, 1874.

Messrs. D. D. MALLORY & Co., *Baltimore.*

DEAR SIR: We shall be pleased to fill all your orders for solder, and will guarantee to do so as cheap as any one in the country, think can give you better grade of solder at less price than you can do outside of us.

Should like to call your attention to patent capping irons, which are offering to the packers, and think we have the control of all irons using the centre rod for holding down the cap while sealing cans. Have purchased the patent of Abel Barker, of May 17th, 1870, and find that all capping or soldering irons operating with a centre rod, are an infringement on Barker's patent: think the Ewalt & Tillery iron is an infringement; should be pleased to have you send to Washington and get a copy of Barker's patent, of May 17th, 1870, and judge for yourself: shall proceed with the Barker patent, and if entitled to the priority of the central rod, shall exclude all others from using or——

294 60th Cross Inter. In your former testimony you stated that you had received a telegram from Mr. Lang, requesting you to meet him in New York, but you did not meet him there, and you were asked, on cross-examination, if that telegram which you received from Lang was not in answer to a communication from you, asking him to make an appointment, to which you replied, "I

have no recollection of having any communication with him about an appointment." Please look at postal card now shown you and herewith filed, marked Complainant's Exhibit Mallory No 10, and state if you wrote that postal card.

Ans. I did.

Complainant's Exhibit Mallory No. 10, filed March 20th, 1880.
ISAAC BROOKS, JR., *Examiner.*

Postmark: Fair Haven, Ct. Sept. 11.

Mr. E. M. Lang,
Portland,
Maine.

Please let me know when you will be in N. Y., would like to see you in relation to the capping iron.

Yours, respectfully,

D. D. MALLORY,

FAIR HAVEN, CONN., *Sept. 11th*, 1876.

61st Cross-Inter. Was not Lang's telegram in answer to that postal card from you?

Ans. It may have been.

62d Cross-Inter. How long after that postal card was written before you received a telegram from Lang?

Ans. I could not state.

63d Cross-Inter. To whom was your reply sent to Mr. Lang's telegram?

Ans. I don't remember making any reply.

295 Complainants herewith file complainants Exhibit Mallory No. 11.

Complainants Exhibit Mallory No. 11, filed March 20th, 1880.
ISAAC BROOKS, JR., *Examiner.*

Mr. E. M. LANG, *Rennert House.*

BALTO., *Octo* 3, '79.

Mr. LANG: Mr. Mallory telephoned up that he can't meet you in New York to-morrow.

H. A. WAIDNER & CO.

64th Cross-Inter. Look at Exhibit marked Complainants Exhibit Mallory No. 12, and state if you wrote that letter?

Ans. I did.

Complainants' Exhibit Mallory No. 12, filed March 20th, 1880.
ISAAC BROOKS, JR., *Examiner.*

BALTIMORE, *Oct.* 9, 1879.

Mr. E. M. LANG.

DEAR SIR: I had an engagement on Saturday last, and could not

meet you in N. Y.; will you please call at my house or office the next time you are in the city; would like to see you and talk with you; will insure you that we will not harm you.

When do you expect to be here again?

Yours, resp'y, D. D. MALLORY.

65th Cross-Inter. I have repeatedly tried to discover through
296 the witnesses who have testified in this cause, when and where, and by whom certain exhibits filed in this cause were made. I now desire to ask you when, where, and by whom was Exhibit Casey made?

Ans. I could not tell.

66th Cross-Inter. Who paid for it?

Ans. I do not know.

67th Cross-Inter. Answer the last two questions with reference to Exhibit Weinbrenner, J. T. Jones, J. T. Jones No. 2, and Burris.

Ans. I do not know.

68th Cross-Inter. You have had as witness in your behalf William D. Brooks; did you know the character of William D. Brooks with this community before you had put him on the stand in this cause?

Ans. I never heard of his having a bad one.

69th Cross-Inter. Do you know Mr. E. C. Thomas, Jr.?

Ans. I don't know that I do.

70th Cross-Inter. Do you know Oliver A. Parker, William H. Thomas, James Flynn, Philip Shott, Alexander E. Suter; and, if yea, what is the standing of these men? (Objected to.)

Ans. I know Oliver A. Parker; I have seen Mr. Thomas—I can't say that I know him. I knew Philip Shott and James Flynn. I don't think I know Alexander Suter. The standing of those men, I know, is good, so far as I know.

71st Cross-Inter. Did you not know that all of these gentlemen in the case of the Combined Patent Can Company against Goldsmith and others had testified to the bad character of Wm. D. Brooks, and that some of them had testified that he was not worthy to be believed on oath? (Objected to.)

Ans. I did not; I don't think I ever heard of the case before.

72d Cross-Inter. Were you not a witness in that very case, as to the character of Wm. D. Brooks, after these gentlemen had testified as to his bad reputation?

Ans. I have no recollection of ever having heard of the case before.

297 Re-direct by Mr. BROWN:

1st Re-direct Interrogatory. Has Tillery agreed to assign those patents, since the suit has been instituted in Richmond, if you would loan him two hundred dollars?

Ans. He has.

2d Re-direct Inter. May you not in some case have testified to the character of Wm. D. Brooks without now remembering the case?

Ans. I may have done so, but I have no recollection of ever having done so.

Re-cross-examination by Mr. PRICE:

1st Re-Cross-Interrogatory. When was it that Mr. Tillery agreed to assign you those patents if you should pay him two hundred dollars?

Ans. I don't know the date; it was the last time he was up here—it was during the month of March.

2d Re-Cross-Inter. With whom did he so agree?

Ans. With myself.

3d Re-Cross-Inter. Did you inform him then that you had brought suit.

Ans. I did not.

D. D. MALLORY.

Subcribed and sworn to before me, this 20th day of March, 1880.

ISAAC BROOKS, JR., *Examiner.*

Robert H. Smith.

ROBERT H. SMITH, a witness produced on behalf of the defendants, after being duly sworn, deposes and says as follows:

298 I am one of the counsel for defendants in this case. The names which are mentioned in the answer in this case to prove prior use, with the exception of Mr. I. C. Luddington, were given us by Mr. Tillery. He stated that they would prove that they had seen him use his machine prior to 1870. He brought Fritz to our office, prior to the filing the answer, and he stated that he had seen Mr. Tillery use his iron about 1864 or 1865. Since we began taking testimony, Fritz came to our office and stated that it was not the fact. I have also seen O'Brien since we began the testimony, and he stated that he had not seen the machine before 1872. I had never seen O'Brien before that. The other witnesses, with the exception of Dulaney, we have made diligent search for, and have not been able to find them at the places which Mr. Tillery said they were to be found. Mr. Tillery stated that Mr. Mallory wished him to help us to work up the case. Mr. Mallory said the same thing to us. Dulaney is a brother-in-law of Mr. Tillery, as Mr. Tillery has told me. We did not think it worth while to see Dulaney when we found the other witnesses could not prove the prior use, as we had been informed we could. Calvin Weinbrenner, whose name is given to prove prior use, lives outside of the State of Maryland, and has not to my knowledge been in the State during the taking of this testimony.

ROBT. H. SMITH.

Subscribed and sworn to before me, this 20th day of March, 1880.

ISAAC BROOKS, JR., *Examiner.*

299 In the Circuit Court of the United States, for the District of Maryland.

MCMURRAY, LANG AND BURNHAM
vs.
DWIGHT D. MALLORY *et al.*

To BENJAMIN PRICE, Solicitor for Complainants:

You hre hereby notified that we will proceed to take the testimony *de bene esse*, of Jabez A. Bostwick, of New York city, on behalf of the respondents in the above-entitled cause, before Edward L. Owen, a United States commissioner, at his office, No. 71 Wall street, in said city, on Wednesday, the 31st day of March, 1880, at 10 a. m., continuing from day to day until the same is completed. The cause of taking his testimony as aforesaid, is that said Jabez A. Bostwick, lives more than one hundred miles from the place where the said case will be tried.

BROWN & SMITH,
Solicitors for Respondents.

Service admitted this 1st day of March, 1880.

BENJAMIN PRICE,
For Complainant.

Circuit Court of the United States for the District of Maryland.

MCMURRAY, LANG AND BURNHAM
vs.
DWIGHT D. MALLORY *et al.*

Testimony on behalf of the respondents taken before Edward L. Owen, U. S. commissioner, at the city of New York, on the third day of March, A. D. 1880.

300 Pursuant to notice parties appear.

Present: Benjamin Price, Esq., appears for the complainants. Robert H. Smith, Esq., appears for the respondents.

JABEZ A. BOSTWICK, being duly sworn, says:

1st Question. Please state your age, residence, and occupation.

Answer. I am forty-five years old; I reside at 821 Fifth avenue, New York city; I am a merchant.

2d Ques. Please look at the paper now shown you, marked "Complainants Exhibit Bostwick Original Patent," and state whether or not you are the Mr. Bostwick therein named.

(Counsel for the complainants objects to any and all testimony by Mr. Bostwick which will in any way affect the validity or im-

pair the value of the patented improvement in the hands of his assigns.)

Ans. I am.

3d Ques. Do you now own the letters patent described in that exhibit; if not, to whom did you sell them; when and for what price? (Objected to.)

Ans. I do not own them. I should like to see the record to refresh my memory as to the name of the purchaser, also as to the date when I sold it; both buyer and date are a matter of record. I cannot state the price I sold that patent for; I can tell by referring to my books.

4th Ques. With whom did you negotiate the sale?

Ans. David A. Burr was my counsel, and negotiated the sale for me.

5th Ques. Do you not know Edward M. Lang, one of the complainants in this cause?

Ans. I have met him, perhaps two or three times—I don't think more than that—with reference to this patent.

301 (Answer of the witness objected to by complainants' counsel.)

6th Ques. When did you first meet him, and under what circumstances?

Ans. I think I met him a year or so before I sold this patent; I think he called at my office to inquire about the patent.

7th Ques. State whether or not he is not the person to whom you sold the patent. (Objected to.)

Ans. I think he is; my reason for stating the above, that I did not know to whom I sold the patent, was that the sale was negotiated through my counsel, and I could not testify whether it was to Mr. Edward M. Lang, William H. Lang, or some other party that the assignment was made to, as I kept no copy of this assignment.

8th Ques. With whom else, if any one, did you have any negotiations for the sale?

Ans. I don't remember having any other negotiations with any other person for the sale.

9th Ques. State the date of the sale, as nearly as you can, from memory.

Ans. I think it was about two years since, perhaps not quite so long.

10th Ques. State the price as nearly as you can.

Ans. I think it was a thousand dollars, but I am not certain; I could give the amount by referring to my books; I will look at my books, but the thousand dollars is near enough to it.

11th Ques. What was your business at the time you made the invention claimed in these letters patent?

Ans. Same business, including the packing of oil in cans and cases.

12th Ques. State whether or not you have ever had any expe-

rience in the packing of oysters and fruits in hermetically sealed cans.

Ans. I have not.

302 13th Ques. Have you ever sold any machines, or granted any licenses to use machines, constructed in accordance with said letters patent?

Ans. I have not.

14th Ques. State whether or not you have ever used any machines constructed according to said letters patent; if yea, when and how many? (Objected to.)

Ans. I have not.

15th Ques. State whether or not you have ever seen any machines constructed according to said letters patent? (Objected to.)

Ans. I have not, excepting the first models I made.

16th Ques. Does or not the assignment of said letters patent to Edward M. Lang, or whomever else it was made to, show the actual consideration which was paid for the same?

Ans. I think it does.

17th Ques. Please reflect, and state whether or not the consideration paid was five hundred dollars?

Ans. I couldn't state that; I want to state that the consideration was not over a thousand dollars nor under five hundred dollars.

(Complainants' counsel, without waiving any objection to the testimony of Mr. Bostwick, or to the interrogatories propounded to him, nevertheless proceeds to cross-examine him, as follows:)

Cross-examined by Mr. PRICE.

1st Cross-Question. You have stated in your testimony-in-chief that the negotiations for the sale of this patent were left to your counsel, Mr. David A. Burr; will you please state what, if any, information you gave to your counsel, Mr. Burr, relating to parties who had infringed your patent?

(Objected to, unless such information was given in the presence of the respondents.)

303 Ans. I gave them whatever information I had with reference to infringements in Baltimore, and I think in Portland, Maine.

2d Cross-Ques. Do you remember who the parties were in Baltimore, and also in Portland? (Objected to.)

Ans. I think the parties in Baltimore by the name of Burroughs; I think in Portland by the name of Lang.

3d Cross-Ques. Did you also know of any parties in New York who were using an iron which you thought was infringing your patent? (Objected to.)

Ans. A Mr. Parker, of the firm of West & Parker or Watts & Parker, provision merchants, on Front street, New York.

4th Cross-Ques. Did you see the soldering tool which Mr. Parker was then using? (Objected to.)

Ans. Mr. Parker showed me an iron in my office, which he proposed to use; I don't think he packed any goods at that time, but he proposed to go into the packing business.

5th Cross-Ques. How came Mr. Parker to call upon you and show you the iron? (Objected to.)

Ans. On account of our controlling several patents for the manufacture of tin cans, and as he proposed to go into the manufacture of tin cans he desired to know whether the can he proposed to manufacture infringed our patents, and also showed me the the soldering iron he proposed to use.

6th Cross-Ques. Did you consider that soldering iron an infringement on the Bostwick patent heretofore shown you? (Objected to.)

Ans. I did.

7th Cross-Ques. Look at the little model now show you, marked "Exhibit J. T. Jones," and state if the iron Mr. Parker showed you had a central rod as shown in that exhibit? (Objected to.)

Ans. It had a central rod or pipe.

8th Cross-Ques. Was the central rod made of gas pipe? (Objected to.)

Ans. I think it was.

304 9th Cross-Ques. Did Mr. Parker propose to use that iron for oil cans; and if not, what kind of packing did he propose to undertake? (Objected to.)

Ans. Packing of meats.

10th Cross-Ques. What kind of packing were the parties in Baltimore and in Portland engaged in?

Ans. I understood, engaged in packing of fruits and oysters.

11th Cross-Ques. Was this the information, I mean concerning Parker, Burroughs, and Lang, that you gave to your counsel, Mr. Burr; and if yea, what did you instruct him to do in the premises? (Objected to.)

Ans. This was the information I gave him, and I instructed him to follow the matter up for me.

12th Cross-Ques. In your first interview with Mr. Lang upon the subject of the purchase of your patent, what price did you ask him for it?

Ans. That I don't remember.

13th Cross-Ques. Do you remember whether it was ten thousand dollars?

Ans. I do not.

14th Cross-Ques. Do you remember discovering after your first interview with Mr. Lang, and after a demand had been made upon him for the payment of royalty, and an account of his irons already made and sold, that he had purchased a patent of Abel Barker for soldering irons? (Objected to.)

Ans. I do not know whether I learned from Mr. Lang before the demand of my counsel for royalties had been made that he, Mr. Lang, had purchased or was the owner of another patent, which he claimed antedated my own.

15th Cross-Ques. When you did so learn of this fact; did you not modify or reduce the price which you originally asked Mr. Lang for your patent? (Objected to.)

Ans. I think I did.

J. A. BOSTWICK.

305 Subscribed and sworn to before me, this 3d day of March, 1880.

Re-called by respondent's counsel:

1st Question. Is "Exhibit J. T. Jones," now shown you, like the the model filed by you in the Patent Office when you applied for your letters patent? (Objected to.)

Ans. I think it is.

J. A. BOSTWICK.

Sworn to before me, this 3d day of March, 1880.

EDWARD L. OWEN,
U. S. Commissioner for the Southern District of New York.

UNITED STATES OF AMERICA, } ss:
Southern District of New York, }

I, Edward L. Owen, the commissioner before whom the foregoing testimony was taken, do hereby certify that I was attended by the solicitors for the respective parties and the witness; then the witness was first sworn to testify the truth, the whole truth, and nothing but the truth, in respect of the matters to be inquired of; that by consent of the solicitors, the testimony was reduced to writing by my appointed clerk, and signed by the witness.

I further certify that I am not of counsel for either of the parties, nor in any respect or manner interested in the result of said suit.

In testimony whereof, I have hereunto set my hand and seal, this third day of March, in the year one thousand eight hundred and eighty, and of the Independence of the United States the one hundred and fourth.

[SEAL.] EDWARD L. OWEN,
U. S. Commissioner for the Southern District of New York.

306 *Respondents' Exhibit "Emmart."*

AUGUST 18TH, 1879.

9 or 10 men caping with the solid iron.

At D. D. MALLORY.

August 19th 1879.

Defendants' Exhibit Emmart. Filed Dec. 23, 1879.
ISAAC BROOKS, Jr., *Examiner.*

309

JOHN A. TILLERY & SAMUEL A. EWALT.

Improvement in Soldering-Tool.

No. 126,852. Patented May 14, 1872.

No. 250
McMurray et al
v.
Mallory et al
page 309

Fig. 1.

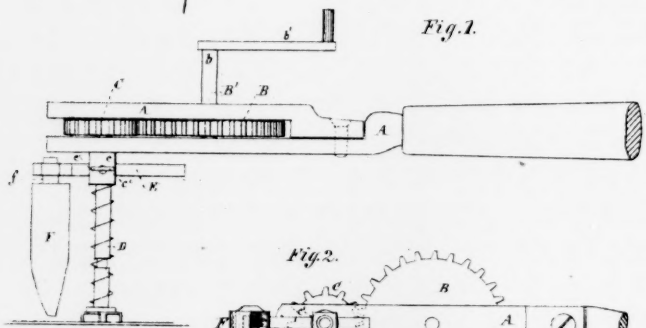
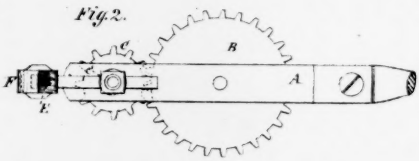


Fig. 2.



Witnesses:
J. Worthington
Thos. D. D. Durand

Inventor:
John A. Tillery
Samuel A. Ewalt
Per Munn & Co
Attorneys.

307 *Defendants' Exhibit "Tillery No. 1."*

No. 126,852. THE UNITED STATES OF AMERICA.

To all to whom these presents shall come:

Whereas John A. Tillery and Samuel A. Ewalt, of Baltimore, Maryland, have presented to the Commissioner of Patents a petition praying for the grant of letters patent for an alleged new and useful improvement in soldering tools, a description of which invention is contained in the specification, of which a copy is hereunto annexed and made a part hereof, and have complied with the various requirements of law in such cases made and provided; and,

Whereas, upon due examination made, the said claimants are adjudged to be justly entitled to a patent under the law:

Now, therefore, these letters patent are to grant unto the said Tillery and Ewalt, their heirs or assigns, for the term of seventeen years from the fourteenth day of May, one thousand eight hundred and seventy, to the exclusive right to make, use, and vend the said invention throughout the United States and the Territories thereof.

308 In testimony whereof, I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the city of Washington, this fourteenth day of May, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the United States of America the ninety-sixth.

[SEAL OF PATENT OFFICE.] B. R. COWEN.

Countersigned:

M. D. LEGGETT,

Acting Secretary of the Interior,

Commissioner of Patents.

(Here follows diagram, marked page 309.)

310 126,852.

UNITED STATES PATENT OFFICE.

John A. Tillery and Samuel A. Ewalt, of Baltimore, Maryland.

Improvement in Soldering Tools.

Specification forming part of Letters Patent No. 126,852, dated May 14, 1872.

Specification describing an Improvement in Soldering-Tools, invented by JOHN A. TILLERY and SAMUEL A. EWALT, of Baltimore, in the county of Baltimore and State of Maryland.

The invention relates to that class of soldering-tools which are usually rotated about the cap by twirling or carrying it around with the hand; and consists in combining therewith a simple mechanism for operating it more rapidly and conveniently. The invention, however, mainly and more particularly consists in an arc-shaped

soldering-tool, adapted to all the various sized cans and caps used.

Figure 1 is a side view. Fig. 2 is a front view.

A represents a bifurcated handle, between whose prongs are journaled the two spur-wheels B C. On the prolongation *b* of shaft B is placed a hand-crank, *b'*, while on a prolongation of the shaft *c* of wheel C is fastened a yielding tubular holder or rest, D. This shaft *c* is perforated at c^1, and provided with a set-screw, c^2. Through the hole c^1 fits one end of the tool-stock, E, which may be set out radially at any distance from the axis of shaft *c*. The other end of this tool-stock is provided with an eye or angular aperture which receives shank *f* of tool F. This tool has its lower edge formed on a small arc of a circle, or on a mere point.

The mode of operation is as follows: The rest D is placed upon the middle of cap and held down with one hand under yielding pressure, while with the other hand the operator turns the crank *b'* and adjusts the solder in the cavity about the cap. As soon as an order for one size of cans is filled, and another for a larger or smaller size is reached, the operator simply loosens the set-screw c^2, moves the tool further from or nearer to the shaft *c*, and he is again ready for work.

Instead of having a tool, as now, for each size of cans, one will answer for any number whatever.

Having thus described our invention, what we claim as new, and desire to secure by letters patent, is—

1. The soldering-tool F, constructed and combined with an adjustable stock, E, and rotary shaft *c*, as and for the purpose described.

2. The bifurcated handle and crank-gear mechanism, combined with tool and spring rest, as and for the purpose set forth.

JOHN A. TILLERY.
SAML. A. EWALT.

Witnesses:
THOS. D. D. OURAND,
SOLON C. KEMON.

311 *Defendants' Exhibit "Tillery No. 2."*

No. 127,119. THE UNITED STATES OF AMERICA.

To all to whom these presents shall come:

Whereas John A. Tillery, of Baltimore, Maryland, has presented to the Commissioner of Patents a petition praying for the grant of letters patent for an alleged new and useful improvement in soldering tools, (he having assigned his right, title, and interest in said improvement to himself and Samuel A. Ewalt, of same place,) a description of which invention is contained in the specification, of which a copy is hereunto annexed and made a part hereof, and has complied with the various requirements of law in such cases made and provided; and,

Whereas, upon due examination made, the said claimant is adjudged to be justly entitled to a patent under the law:

313

JOHN A. TILLERY.

Improvement in Soldering-Tools.

No. 127,119. Patented May 21, 1872.

No. 250.
McMurray et al
v.
Mallory et al
page 313

Fig. 1.

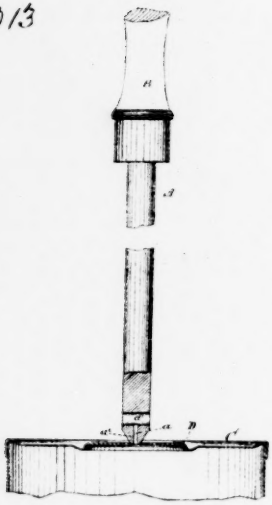


Fig. 2.

Witnesses:
C. Mathis
Thos. A. Townsend

Inventor:
John A. Tillery
Per Munn & Co
Attorneys.

Now, therefore, these letters patent are to grant unto the said Tillery and Ewalt, their heirs or assigns, for the term of seventeen years from the twenty-first day of May, one thousand eight hundred and seventy-two, the exclusive right to make, use, and vend
312 the said invention throughout the United States and the Territories thereof.

In testimony whereof, I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the city of Washington, this twenty-first day of May, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the United States of America the ninety-sixth.

[SEAL OF PATENT OFFICE.] B. R. COWEN,
Acting Secretary of the Interior.

Countersigned:
M. D. LEGGETT,
Commissioner of Patents.

(Here follows diagram, marked p. 313.)

314 127,119

UNITED STATES PATENT OFFICE.

John A. Tillery, of Baltimore, Maryland, assignor to himself and Samuel A. Ewalt, of same place.

Improvement in Soldering Tools.

Specification forming part of Letters Patent No. 127,119, dated May 21, 1872.

Specification describing an improvement in soldering-tools, invented by John A. Tillery, of Baltimore, in the county of Baltimore and State of Maryland.

The invention consists in centering the soldering-tool with a rod which has a vertical end perforation provided with a side aperture, so that while the soldering-tool is itself enabled to move in a perfect circle from this axis or centre of motion the air from within the can still freely escapes.

Figure 1 is a vertical section. Fig. 2 is a top view of the cap.

A represents a centering-tool rod, provided with a handle, B. The lower end of this rod may have a section removed or a channel formed therein; but I prefer to have an axial perforation, *a*, cross aperture a^1, and a conical end, a^2. C represents the top of a can, on which is to be soldered a cap, D. In the center of this cap there is generally made a central opening, *d*, for the escape of air and steam from within. After the can has been supplied with its intended contents this hole is stopped. The use of a center-piece as ordinarily constructed would stop this necessary vent, and cause a forced outlet at some other point. Hence the shanks of ordinary crow-feet holders, or those having other forms of bearing-surface, have been alone relied upon to afford a center of motion.

Now, by my construction of centering-rod with a tubular end and

side outlet a reliable centering-tool is obtained, while a holder sliding over it, as well as the soldering iron itself, is maintained always in the exact position desired.

Having thus described my invention, what I claim as new, and desire to secure by letters patent, is—

The centering-tool for soldering irons, provided with end perforation *a* and cross-aperture a^1, as and for the purpose described.

JOHN A. TILLERY.

Witnesses:
OTTO BENNER,
N. I. SCHAEFER.

315 *Defendants' Exhibit "Tillery No. 3."*

No. 127,120. THE UNITED STATES OF AMERICA.

To all to whom these presents shall come:

Whereas John A. Tillery and Samuel A. Ewalt, of Baltimore, Maryland, have presented to the Commissioner of Patents a petition praying for the grant of letters patent for an alleged new and useful improvement in soldering-tools, a description of which invention is contained in the specification, of which a copy is hereunto annexed and made a part hereof, and have complied with the various requirements of law in such case made and provided; and

Whereas, upon due examination made, the said claimants are adjudged to be justly entitled to a patent under the law:

Now, therefore, these letters patent are to grant unto the said Tillery and Ewalt, their heirs or asssigns, for the term of seventeen years, from the twenty-first day of May, one thousand eight hundred and seventy-two, the exclusive right to make, use, and vend the said invention throughout the United States and the Territories thereof.

316 In testimony whereof, I have hereunto set my hand and caused the seal of the Patent Office to be affixed at the city of Washington, this twenty-first day of May, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the United States of America the ninety-sixth.

[SEAL OF PATENT OFFICE.] B. R. COWEN,
Acting Secretary of the Interior.

Countersigned:
M. D. LEGGETT,
Commissioner of Patents.

(Here follows diagram, marked page 317.)

317

J. A. TILLERY & S. A. EWALT.

Improvement in Soldering-Tools.

No. 127,120. Patented May 21, 1872

No. 250
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Fig. 1

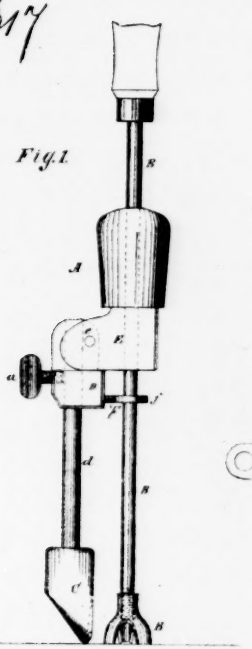
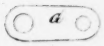


Fig. 2.



Witnesses:
G. Mathys
Solon A. Roman

Inventor:
John A. Tillery
Samuel A. Ewalt
Per
Attorneys.

318 127,120.

UNITED STATES PATENT OFFICE.

John A. Tillery and Samuel A. Ewalt, of Baltimore, Maryland.

Improvement in Soldering-Tools.

Specification forming part of Letters Patent No. 127,120, dated May 21, 1872.

Specification describing an Improved Tool, invented by JOHN A. TILLERY and SAMUEL A. EWALT, of Baltimore, in the county of Baltimore and State of Maryland.

The invention consists, first, in making a soldering-tool adjustable radially from a hinge-joint, in order to adapt the same tool to be used with caps of varying size; second, in moving said tool out and in, at the same time fixing it at any point of adjustment by means of a screw that has a loop-head through which passes the holder.

Figure 1 is a side view of the soldering-tool. Fig. 2 is a detail view of a yoke which may be used with said tool.

A represents our soldering-tool, provided with the cap-holder B, which maintains the cap in position while the soldering-iron C is rotated. D is a stock, in which the shank *d* of soldering-iron is held at any point by a clamp-screw, *d*. E is the body, in which the stock D is hinged at *e*, while the holder B passes vertically and loosely therethrough. F is a screw, having loop-head *f*, which connects the said holder B and stock D, while it allows them to be spaced at any desired distance apart. In order to effect a change in the radial distance between the centering holder B and the stock D that holds the soldering-iron , the holder is first removed and the screw F moved in or out. This is our preferable mode of spacing the holder and soldering-iron stock, although other means may be adopted which are perhaps equivalent. For instance, we may use a series of the yokes G, represented in Fig. 2, substituting a larger or smaller one, according as we wish to increase or lessen the distance of the iron from the holder. Again, a set-screw may be applied through the stock E, and against the tool-holder at any point of adjustment.

The advantages of this tool consist, first, in the arc-shape by which we can see at a glance any point which has been left unsoldered or imperfectly soldered, and which defect can be remedied at once without removing the tool; second, in the option that it allows us of using either wire solder or the cheaper drop solder, thereby saving one half the expense.

Having thus described our invention, what we claim as new, and desire to secure by letters patent, is—

1. A soldering-tool, provided with a hinged-stock, D, to admit of its radial adjustment from the cap-holder B, substantially as and for the purpose described.

2. The hinged stock D of a soldering-iron combined with the

screw F, having a loop, *f*, through which passes the centering holder B, as and for the purpose described.

JOHN A. TILLERY.
SAML. A. EWALT.

Witnesses to both signatures:
SOLON C. KEMON,
THOS. D. D. OURAND.

319 *Defendant's Exhibit "Hay."*

Department of the Interior, United States Patent Office.

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted Hay, M. L. and M. A. Gray, April 2d, 1867, No. 63,504, for Improved Soldering Machine.

In testimony whereof, I, W. H. Doolittle, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this thirteenth day of February, in the year of our Lord one thousand eight hundred and eighty, and of the Independence of the United States the one hundred and fourth.

[SEAL OF PATENT OFFICE.] W. H. DOOLITTLE,
Acting Commissioner.

320 No. 63,504.

THE UNITED STATES OF AMERICA.

To all to whom these letters patent shall come:

Whereas James L. Gray, of Baltimore, Maryland, has alleged that he has invented a new and useful Improved Soldering Machine (he having assigned his right, title, and interest in said invention to F. M. Hay, M. L. Gray, and M. A. Gray, of the same place), which he states has not been known or used before such invention; has made oath that he is a citizen of the United States; that he does verily believe that he is the original and first inventor or discover of the said invention, and that the same hath not, to the best of his knowledge and belief, been previously known or used; has paid into the Treasury of the United States the sum of thirty-five dollars, and presented a petition to the Commissioner of Patents, praying that a patent may be issued therefor:

These are, therefore, to grant, according to law, to the said Hay, M. L. and M. A. Gray, their heirs, administrators, or assigns, for the term of seventeen years from the second day of April, one
321 thousand eight hundred and sixty-seven, the full and exclusive right and liberty of making, constructing, using, and vending to others to be used, the said invention, a description whereof is given in the schedule hereunto annexed, and made a part of these presents.

In testimony whereof, I have caused these letters to be made patent, and the seal of the Patent Office to be hereunto affixed.

Given under my hand, at the city of Washington, this second day of April, in the year of our Lord one thousand eight hundred and sixty-seven, and of the Independence of the United States of America the ninety-first.

[SEAL.]

W. T. OTTO,
Acting Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.

T. C. THEAKER,
Commissioner of Patents.

322 UNITED STATES PATENT OFFICE.

James L. Gray, of Baltimore, Maryland, assignor to F. M. Hay, M. L. Gray, and M. A. Gray, of same place.

Improved Soldering Machine.

Specification forming part of Letters Patent No. 63,504, dated April 2, 1867.

To all whom it may concern:

Be it known that I, James L. Gray, of the city and county of Baltimore, State of Maryland, have invented a new and useful machine for soldering the tops and bottoms on preserve cans; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the improved machine. Fig. 2 is a transverse section, taken in a vertical plane through the machine. Fig. 3 is an enlarged view, in detail, showing the devices for centering and holding a can in place during the operation of soldering its bottom or top.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a new and improved machine which is designated for centering, holding, and rotating preserve cans which are made af metal, during the operation of soldering on the bottoms and caps or tops of the cans, as will be hereinafter described.

To enable others skilled in the art to understand my ivention I will describe its construction and operation.

In the accompanying drawings, A represents a table which is adapted for sustaining the several parts which support, center, and rotate the cans during the operation of soldering. B represents a circular bed upon which the cans are supported and centered. This bed is constructed with a concentric depression in its upper face, and it is secured upon the upper end of a spindle, C, which receives a rotary motion and also a vertical motion. The lower end of the spindle is stepped upon a lever, D, which is pivoted at one end to the frame of table A, and connected at its other end to a had-lever, *a*, by a rod, *b*, as shown in Fig. 1. This hand-lever is pivoted to

one side of the table-frame in a convenient position to the operator standing at the machine, and it is held in the desired position by means of teeth upon a ratchet-plate, *b'*.

The operator can, by means of lever *a*, raise or depress the rotary bed B and its spindle, at pleasure.

The spindle C has a beveled friction-wheel, E, keyed upon it, which is acted upon by a friction-pinion, E', on a horizontal shaft, F. This shaft carries a belt-wheel, G, and is rotated by a balance-wheel, G', through the medium of a belt-collar, *c*, on this balance-wheel, and an endless belt, *c'*, as shown in Fig. 2. The balance-wheel is rotated by means of a treadle, H, to which it is connected by the pitman-rod *d*. On the top of the table A a curved overhanging bracket, J, is secured, which receives, through a vertical eye formed on its end, a vertical rod, *g*. This rod coincides with the axis of motion of the bed B, and is allowed to receive a vertical movement in its eye-bearing. On the upper end of the rod *g* a head is formed for preventing it from slipping down out of its bearing, and on the lower end of this rod spurs are formed, as shown in the drawings. Between the spurred enlargement *h* and the eye-bearing on standard J, a spring is applied, as shown at *i*, for the purpose of holding the cans down in place with an elastic pressure. A bracket-arm, *j*, is secured to the right-hand side of the standard J, to the outer end of which an arm, *k*, is pivoted, having a ring-bearing, *l*, applied to it, for receiving and supporting a soldering iron, L, as shown in the drawings.

Having thus described the several parts of the machine, I will now describe the operation thereof.

The furnace for heating the soldering-irons may be located upon the table A, or in any other convenient position to the operator. The rotary bed B is depressed by releasing the lever *a* from its ratchet-teeth. The heated soldering-iron is then inserted through its ring-bearing *l*, and the can placed upon the bed B and centered in the depression in this bed. The operator, with his foot upon the treadle H, rotates the driving-shaft, and at the same time elevates the bed B to the position shown in Figs. 2 and 3, which movement brings the friction-wheels E E' together, and also causes the spring-rod *g* to press upon the center of the loose plate upon the can. The plate which is to be soldered upon the can, and also the can itself, are, in this manner, held firmly in their places and caused to rotate. During this rotation of the can the operator, with his hand upon the handle of the soldering-iron, solders the plate in place, after which the bed B is depressed and the can removed.

3221/2

Having described my invention, what I claim as new, and desire to secure by letters patent, is—

1. A rotary bed, B, in combination with a yielding holder, *g*, or their equivalents, operating substantially as and for the purpose described.

2. The spurs *h*, in connection with the yielding holder *g*, substantially as and for the purpose described.

323

J. L. Gray,

Soldering Machine.

No. 63,504. Patented Apr. 2, 1867.

No. 250.
McMurray et al
v.
Mallory et al
Page 323

Fig. 1

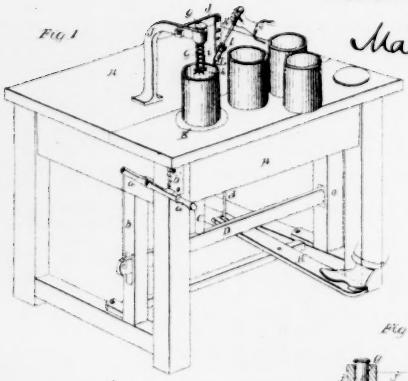


Fig. 3

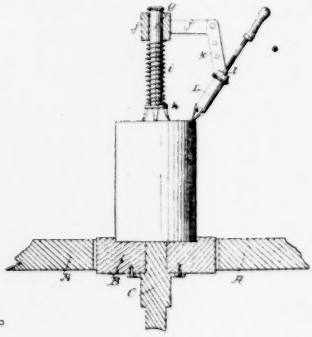
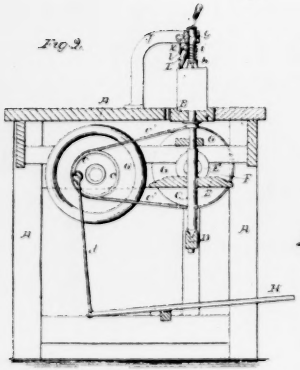


Fig. 2.



Witnesses:
R. F. Campbell
Chas. Schaefer

Inventor:
J. L. Gray
by Munn & Co
Attorneys

3. In combination with the rotary bed B and yielding holder *g*, the soldering-iron support, substantially as and for the purpose described.

4. The within described machine for centering, supporting, and rotating preserve-cans, said machine having its parts constructed, arranged, and operated substantially as set forth.

JAMES L. GRAY.

Witnesses:
FRANCIS M. HAY,
R. T. CAMPBELL.

(Here follows diagram, marked page 323.)

324 *Defendants' Exhibit "Assignment."*

Department of the Interior, United States Patent Office.

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the records of this office of an assignment recorded in liber K 24, page 164; and that said annexed copy has been compared by me with the original, and that it is a correct transcript therefrom and of the whole of the original.

In testimony whereof, I, W. H. Doolittle, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this twenty-first day of February, in the year of our Lord one thousand eight hundred and eighty, and of the Independence of the United States the one hundredth and fourth.

[SEAL OF PATENT OFFICE.] W. H. DOOLITTLE,
Acting Commissioner.

325 Liber K 24, p. 164.

This assignment made this fourteenth day of Aug., in the year of our Lord one thousand eight hundred and seventy-nine, by Samuel A. Ewalt, of the city of Baltimore and State of Maryland.

Whereas the said Samuel A. Ewalt is the owner of one-third interest in certain letters patent of the United States, that is to say, letters patent for an "Improvement in Soldering Tools," heretofore granted to John A. Tillery and Samuel A. Ewalt on the 14th day of May, 1872, No. 126,852. Also letters patent of the United States for an "Improvement in Soldering Tools," granted to John A. Tillery, assignor to himself and Samuel A. Ewalt, bearing date the 21st day of May, 1872, No. 127,119; also letters patent of the United States for an "Improvement in Soldering Tools," granted to John A. Tillery and Samuel A. Ewalt, of Baltimore, Maryland, bearing date the 21st day of May, 1872, and numbered 127,120;

And whereas the said Samuel A. Ewalt is willing to execute this instrument:

Now, therefore, in consideration of the premises and of the sum of one dollar cash paid by Edward M. Lang to the said
326 Samuel A. Ewalt, the receipt whereof is hereby acknowledged, the said Samuel A. Ewalt hath sold, assigned, and conveyed, and by these presents doth sell, assign, and convey unto the said Edward M. Lang, his personal representatives and assigns, one entire half part of all the right, title, and interest of the said Samuel A. Ewalt in and to the letters patent aforesaid; it being the intention hereby to assign and convey to the said Edward M. Lang one-sixth part of the entire right to the letters patent aforesaid. Witness my hand and seal, this 14th day of August, 1879.

SAMUEL A. EWALT. [SEAL.]

Test: ROBT. RANNERT.

Recorded Aug. 16th, 1879. Ex'd: C. F. L. M.

327 *Defendants' Exhibit "Numsen Patent."*

No. 127,914.

UNITED STATES OF AMERICA.

To all to whom these presents shall come:

Whereas Nathaniel G. Numsen, of Baltimore, Maryland, has presented to the Commissioner of Patents a petition praying for the grant of letters patent for an alleged new and useful

Improvement in Soldering Iron,

(he having assigned his right, title, and interest in said improvement to William Numsen & Sons, of same place,) a description of which invention is contained in the specification, of which a copy is hereunto annexed and made a part hereof, and has complied with the various requirements of law in such cases made and provided; and

Whereas, upon due examination made, the said claimant is adjudged to be justly entitled to a patent under the law:

Now, therefore, these letters patent are to grant unto the said William Numsen & Sons, their heirs or assigns, for the term of seventeen years, from the eleventh day of June, one thousand eight hundred and seventy-two, the exclusive right to make, use, and vend the said invention throughout the United States and the Territories thereof.

328 In testimony whereof, I have hereunto set my hand and caused the seal of the Patent Office to be affixed at the city of Washington, this eleventh day of June, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the United States of America the ninety-sixth.

[SEAL OF PATENT OFFICE.] B. R. COWEN,
Acting Secretary of the Interior.

Countersigned: M. D. LEGGETT,
Commissioner of Patents.

(Here follows diagram, marked page 329.)

329

N. G. NUMSEN.

Improvement in Soldering-irons.

No. 127,914. Patented June 11, 1872

No. 250
Mc Murray et al
v page 329
Mallory et al

Fig. 1.

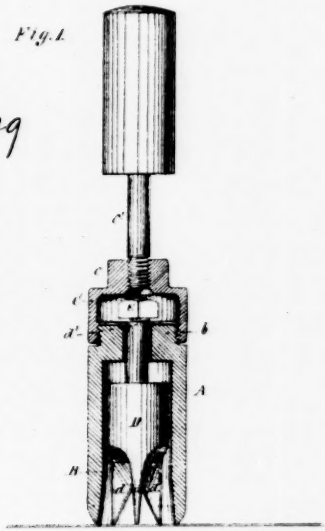


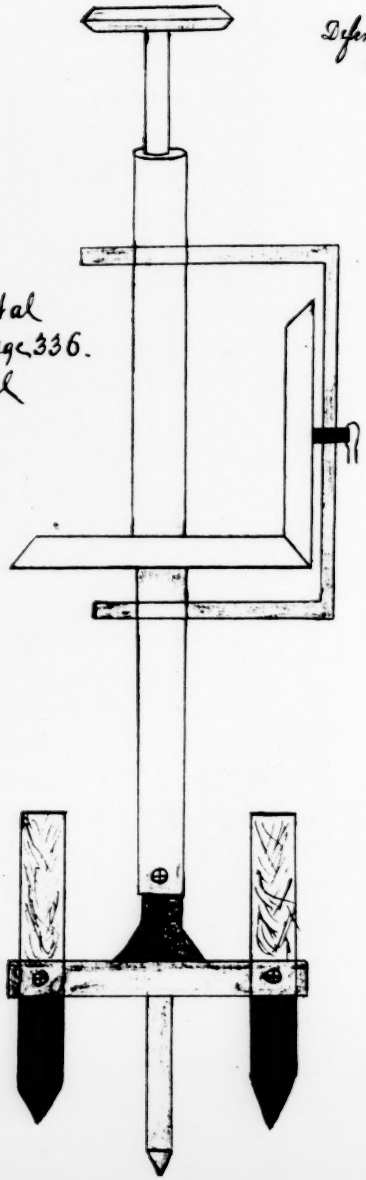
Fig. 2.

Witnesses:
G. Mostkey
Thos. D. D'Amand

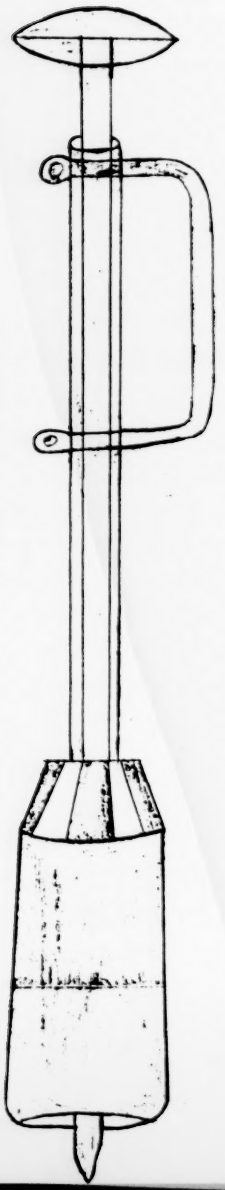
Inventor:
Nathaniel G. Numsen
Per Munn & Co
Attorneys.

Defendants Exhibit
Charles E Hall
No. 5.
Filed March 15 1880
Booe Brooks & Co
Examr

No. 250.
McMurray et al
v. page 336.
Mallory et al



335



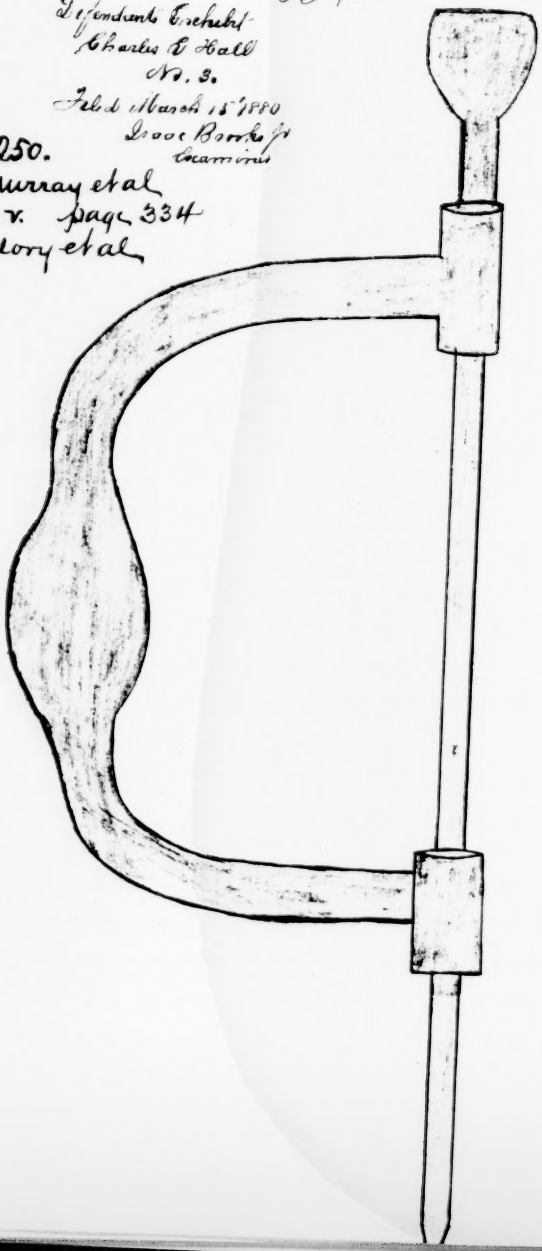
Defendants Exhibit
Charles E Hall
No. 4.
Filed March 15/80
Isaac Brooks Jr
Examiner

No. 250.
McMurray et al
v. Page 335
Mallory et al

334

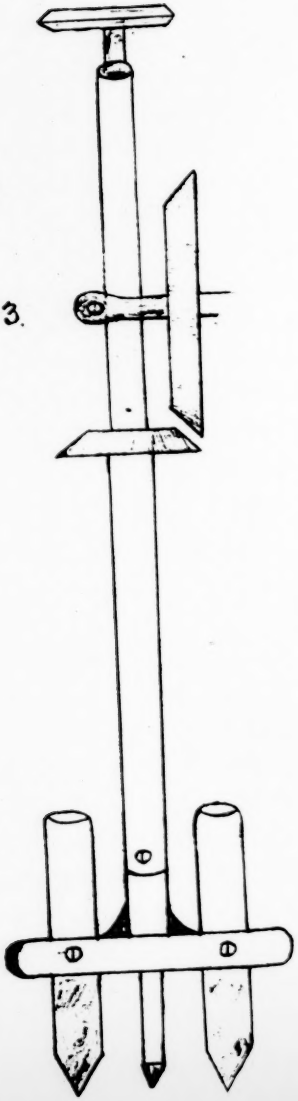
Defendants Exhibit
Charles E Hall
No. 3.
Filed March 15 1880
Jesse Burke Jr
Examiner

No. 250.
McMurray et al
v. page 334
Mallory et al

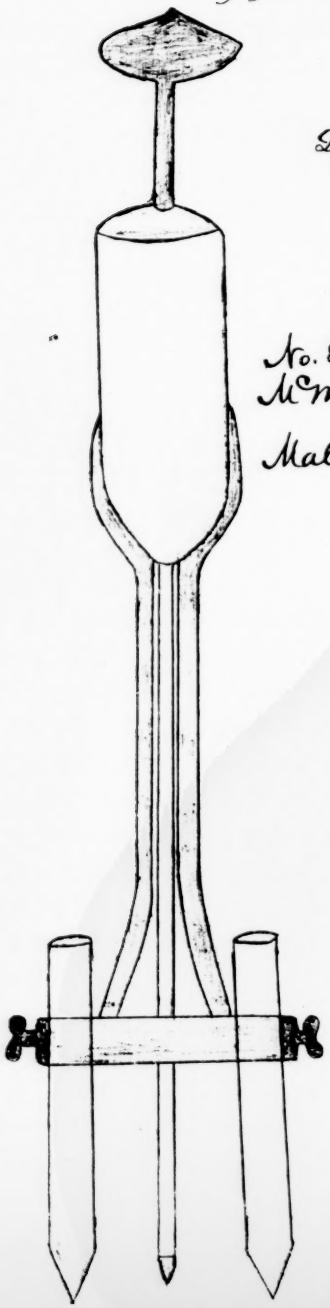


Defendants Exhibit
Charles E Hall
No. 2.
Filed March 15 1890
Isaac Barker Jr
Examiner

No. 250.
McMurray et al
v. Page 333.
Mallory et al



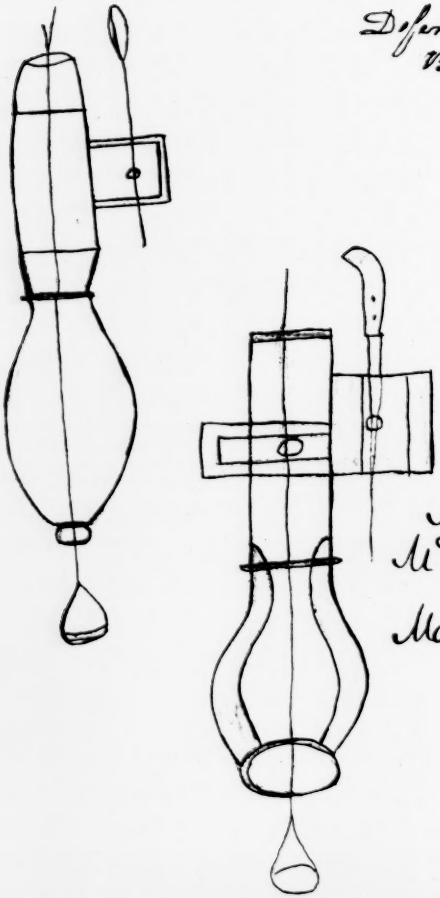
332



Defendants Exhibit
Charles E Hall
No 1.
Filed March 15 1880
Isaac Brooks Jr
Examiner

No. 250.
McMurray et al
v. page 332.
Mallory et al

Defendants Exhibit
Burris Improvement
Filed July 27th 1880
Geo. C. Brooks Jr
Examiner



No. 250.
McMurray et al
v.
Mallory et al

page 331.

330

127,914.

UNITED STATES PATENT OFFICE.

NATHANIEL G. NUMSEN, OF BALTIMORE, MARYLAND, ASSIGNOR TO WM. NUMSEN & SONS, OF SAME PLACE.

Improvement in Soldering Irons.

Specification forming part of Letters Patent No. 127,914, dated June 11, 1872.

Specification describing an improvement in soldering irons, invented by Nathaniel G. Numsen, of Baltimore, in the county of Baltimore, and State of Maryland.

The invention consists in making a soldering tool in three main parts, as hereinafter described.

Figure 2 is an end view of the weighted holder and soldering iron. Fig. 1 is a vertical and central section of the iron, with loose self-adjusting holder applied thereto.

A is the soldering iron, formed of a tubular body, B, having threaded and perforated top *b*, and a cap, C, having the dome *c* and long shank *c'*, on which is fitted the usual wooden handle. D is the holder, made of sufficient weight to press the can firmly by its own gravity. *d* are the prongs, which I preferably employ, but they form no part of my invention, since any other bearing-surface will answer the purpose. The upper end *d'* is threaded, and receives a nut, E. The end *d'* of holder is first inserted at the lower end of tube B, and up through the perforation of top *b*, the nut E then inserted, and the cap C screwed on, when the iron is ready to be heated.

The soldering iron A being then taken from the fire, the nut E rests on top *b* of tube B, and prevents the holder D from being dropped out, while, when placed on the top of can which is to be soldered, the nut slides up into dome *c* of cap C, and allows holder D to adjust itself to the can.

Having thus described my invention, what I claim as new, and desire to protect by letters patent, is—

A soldering iron, consisting of tube B, cap C, and holder D, constructed and arranged substantially as and for the purpose described.

N. G. NUMSEN.

Witnesses:

SOLON C. KEMON,
THOS. D. D. OURAND.

(Here follows six diagrams, marked pages 331, 332, 333, 334, 335, and 336.)

337 *Defendants' Exhibit "Assignment No. 2."*

L 24, p. 460.

This assignment made this first day of September, in the year of

our Lord one thousand eight hundred and seventy-nine, by Edward M. Lang, of Portland, Maine.

Whereas by assignment, bearing date the fourteenth day of August, 1879, Samuel A. Ewalt, of the city of Baltimore, and State of Maryland did assign and convey unto the said Edward M. Lang one entire half part of all the right, title, and interest of the said Samuel A. Ewalt in and to the following letters patent of the United States, that is to say, letters patent of the United States for an "Improvement in Soldering Tools," granted to John A. Tillery and Samuel A. Ewalt, on the 14th day of May, 1872, No. 126,-852; also letters patent of the United States for an "Improvement in Soldering Tools," granted to John A. Tillery and Samuel A. Ewalt on the 21st day of May, 1872, No. 127,119; also letters Patent of the United States for an "Improvement in Soldering Tools," granted to said John A. Tillery and Samuel A. Ewalt, on the 21st day of May, 1872, No. 127,120;

338 And whereas the said Edward M. Lang hath sold and assigned the interest in said letters patent, granted him by said Samuel A. Ewalt:

Now, therefore, in consideration of the premises and of the sum of one dollar cash paid to the said Edward M. Lang, the receipt whereof is hereby acknowledged, the said Edward M. Lang hath sold, and by these presents doth sell, assign, and convey unto Lewis McMurray, Edward M. Lang, and George Burnham, Jr., trading under the name, firm, and style of McMurray, Lang and Burnham of the city of Baltimore, and State of Maryland, their successors, personal representatives, and assigns, all the right, title, and interest of the said Edward M. Lang in and to the letters patent aforesaid.

To have and to hold the same to and unto the use, benefit, and behoof of the said McMurray, Lang and Burnham, as fully and completely as the same would be held by the said Edward M. Lang, had this instrument never been made.

Witness my hand and seal, this first day of September, 1879.

EDWARD M. LANG. [SEAL.]

Test: CHARLES S. MORRILL.

Recorded Oct. 28, 1879. Ex'd: F. F. L. J.

339 *Defendants' Exhibit "Barker Re-issue Record."*

Department of the Interior, United States Patent Office.

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the files of of this office of the file wrapper and contents in the matter of the re-issue letters patent granted Abel Barker, ass'or to Edward M. Lang, July 1, 1879, No. 8781, for imp't in soldering devices.

In testimony whereof, I, W. H. Doolittle, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this seventeenth day of March, in the year of our Lord one

thousand eight hundred and eighty, and of the Independence of the United States the one hundred and fourth.

[SEAL OF PATENT OFFICE.] W. H. DOOLITTLE,
Acting Commissioner.

340 *Petition for Re-issue.*

To the Commissioner of Patents of the United States:

Your petitioner, resident of Wyoming, State of Pennsylvania, prays that he may be allowed to surrender the letters patent for improvement in soldering and unsoldering can-caps, No. R. 6846, granted on the 11th day of January, 1876, whereof Edward M. Lang is now owner, and that letters patent may be re-issued to Edward M. Lang for the same invention upon the annexed specification.

Also, that you will recognize Richard Douglas Williams, of Baltimore, Maryland, as his attorney, with full power of substitution and revocation, to prosecute this application, to make alterations and amendments therein, to receive the patent, if granted, and to transact all business in the Patent Office connected therewith.

ABEL BARKER.

We concur in the above petition, surrender, and power of attorney.

EDWARD M. LANG.

341 *Oath*

STATE OF PENNSYLVANIA, } ss:
County of Luzerne, }

On this 10th day of April, 1879, personally appeared before me, a notary public in and for said county, the above-named petitioner, and made solemn oath that he verily believes himself to be the original and first inventor of the within described improvement in Soldering Machines, patented to him and E. M. Lang, on the 11th day of January, 1876, and that he verily believes that by reason of an insufficient or defective specification the said letters patent are inoperative and invalid; and that the said error has arisen by inadvertence, accident, or mistake, and without any fraudulent or deceptive intention, to the best of his knowledge and belief, and that the entire interest in said letters patent is vested in said Edward M. Lang.

ABEL BARKER.

Sworn and subscribed before me, this day above mentioned.

[SEAL.] JAS. L. POLEN,
Notary Public.

342 To all whom it may concern:

Be it known, that I, Abel Barker, of Wyoming, in the county of Luzerne, and State of Pennsylvania, have invented certain new and useful improvements in Soldering Machines, and I hereby declare

the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawings, in which—

Fig. 1 is a vertical central sectional view of the device.

Fig. 2, a representation of the machine as applied to the can in opening.

Fig. 3, as applied in closing or sealing, with the disk withdrawn and the sliding rod pressed upon the cover to hold it until the solder or sealing material hardens.

June 10, '79. *Fig.* 4 *is a plan view of the disk.*

The purpose of my invention is to provide a convenient machine or device for opening and sealing fruit, oyster, or other cans adapted to be hermetically sealed.

343 In constructing the machine I make the disk, casting, or tool A of sufficient thickness to retain the heat, and of suitable size to cover the lid or cap of the can with the recess B in the under side to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover.

To this disk I connect the handle C, which has a handle *c* for convenience in rotating the soldering iron.

In connection with the handle I use the small rod or wire D, which passes through the soldering iron or disk A, so as to admit of the latter being rotated about, or slid up and down upon, the rod. The rod is connected with the handle C by a collar *d* embracing the latter.

In opening a can the tool or iron A is sufficiently heated to melt the solder, when it is placed over the cover until the solder is completely melted, and the cap is then removed by any sharp pointed instrument.

In closing or sealing a can, the cover or cap is to be placed in proper position upon the can, and solder is laid upon the
344 edge of the cover. The rod D is pushed down through the tool and placed upon the cover to hold it. The heated disk or iron is then pushed down in contact with the
June 10, '79. solder or sealing material until it is melted, *and* then turned back and forth until the solder is spread evenly around the edge of the cover.

The disk is then to be withdrawn with the rod still pressed upon the lid until the solder or sealing material sets or hardens, when the operation is completed. Having thus described my invention, what I claim as new, and desire to secure by letters patent, is—

1.

In a soldering machine a rod adapted to hold the can cap, or lid, in place in combination with a soldering iron mounted upon, and arranged to be rotated about, said rod substantially as described.

2.

In a soldering machine a rod adapted to hold the can cap, or lid,

in place in combination with a soldering iron sliding upon said rod and adapted to be rotated about it, as set forth.

3.

345 In combination with a soldering tool or die, the rod D passing through said tool or die to hold the can cap, or lid, in the process of soldering, substantially as described.

4.—*Erased May* 8, '79.

4.

In a soldering machine the combination with a soldering tool, conforming in shape to the cap to be soldered of an
May 15, '79. *independently movable* rod, D, *upon which the said tool is*
May 8, '79. *mounted*, substantially as described.

5.

The disk or tool A, with the recess B, in its under
May 8, '79. side, in combination with *and mounted upon* the *inde-*
" 15, " *pendently* movable rod or wire D, as set forth.

ABEL BARKER.

Witnesses:
G. M. RICHARD.
JAS. L. POLEN.

[The words printed in italic are in red ink in copy.]

346 UNITED STATES PATENT OFFICE.

To all persons to whom these persents shall come, Greeting:

This is to certify that the annexed is a true copy from the Digest of this office of all assignments, agreements, licenses, powers of attorney, and other instruments of writing, found of record under or relating to re-issued letters patent, granted to Abel Barker, assignor of one-half his interest to E. M. Lang, January 11, 1876, No. 6846, soldering and unsoldering cap-cans, since date of re-issue.

347 In testimony whereof, I, W. H. Doolittle, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this twenty-fourth day of April, in the year of our Lord one thousand eight hundred and nine, and of the Independence of the United States the one hundredth and third.

[SEAL.] W. H. DOOLITTLE,
Acting Commissioner.

348 Assignors—Abel Barker.
Assignees—Edward M. Lang, of Portland, Me.
Date of assignment—Apr. 10, '79.
Date of record—Apr. 19, '79.
Invention—Soldering and unsoldering can-caps, May 17, '70, 103,125. Re-issued Jan. 11, '76, No. 6846.
Territory assigned—All his right, title, and interest in said re-issued

letters patent, and the invention therein described. Also, agreement to execute any application for re-issue, if the same be necessary.

Endorsed: 13,690. U. S. Patent Office, April 29, 1879.

349 13,690.

ROOM NO. 103, DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
WASHINGTON, D. C., *Apr.* 30, 1879.

ABEL BARKER,
Care of Richard D. Williams, Baltimore, Md.

Soldering and Unsoldering Can Caps, Apr. 29, 1879.

The statement on the 2d page, line 13, that the rod D passes through the disk so as to allow the latter to be rotated *about* the rod, is new matter. There is nothing in the original application to warrant such a statement. The disk does not rotate around any axes or center. If it have any, it is not rod D, but handle C.

The 1st and 2d claims are rejected, as they contain the new matter above referred to. The 1st, 2d, 3d, 4th, 5th, and 6th claims are rejected on patent to J. A. Bostwick, No. 104,412, June 21, 1870, soldering irons. The 4th claim is further rejected on English Patent No. 2708, A. D. 1862. The 5th and 6th claims are further rejected on F. W. Brown, No. 77,447, May 5, '68, soldering
350 irons; and on patent to James L. Gray, No. 63,504, Apr. 2, 1867, soldering machines, the recess aggregates with the wire and iron combination. These latter two claims are rejected for indistinctness. The combination of a tool and a wire, &c., is too vague, and is easily met by any iron and any wire.

S. W. STOCKING, *Examiner.*
Per WOLCOTT, 3 *Ass't.*

Endorsed: 13,690. Rej. Apr. 30, '79.

351 HON. COMM'R OF PATENTS:

SIR: In the matter of the application of Abel Barker for Soldering and Unsoldering Can-Caps, filed Apr. 29, 1879. (Re-issue.)

I amend the same as follows:

By erasing claim 4.

By inserting in claim 5, after "D," "upon which the said tool is mounted."

By inserting in claim 6, after "*with*," (line 2,) "and mounted upon."

It is believed that the above amendments dispose of the references cited, as well as the '42 English patent orally referred to by the Examiner, for even admitting, as the Examiner urged, that the Englishman "*must* have had a rod to hold the can-cap," it is putting rather too great a strain upon the imagination to maintain that the

tool *must* have been mounted upon that rod. As to the Bostwick reference, applicant concedes its pertinence and will have an interference with it.

Now as to the question of new matter; applicant cannot
352 understand how the Examiner can take such a position. A copy of the original patent is herewith submitted (Mem.: The patent here alluded to is No. 103,125, page 52, of this record,) and the Examiner's attention is called to the parts *understood* in column I. But one reading is possible of the words "then turned back and fourth," the soldering iron is *rotated*, and the question is then simply "rotated about what?" In view of the fact that the rod D is "plan*d* upon the centre of the cap to hold it "while the tool is moved back and forth," and the tool is mounted on the rod, it is not readily seen how there can be a doubt. It is presumed that the Examiner will not deny that if a rod passes through a disk, and is kept still while the disk is moved back and forth, the disk is rotated about the rod.

The Examiner's ground is taken apparently upon the assumption, entirely unsupported by anything in the file, that the collar is rigidly attached to the rod D. In the first place it is not so stated, and in the second, even if it were, the conclusions do not follow. A *little* model is this day sent to the office in which the collar is integral with the rod, and the disk will make *two* complete revolutions in the same direction about the rod. An ocular demonstra-
353 tion ought to dispose of a theoretical objection.

Respectfully, R. D. WILLIAMS, *Att'y.*

Endorsed: 13,690. Amendment, May 8, '79.

13,690.—Re-issue.

ROOM NO. 103, DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
WASHINGTON, D. C., *May* 12, 1879.

ABEL BAKER,
Care Richard D. Williams, Baltimore, Md.

Soldering and Unsoldering Can-Caps. Apr. 29, '79.

Objection to new matter is repeated.

The office admits that if the rod D is held down on to the centre of the lid, while the disk is being rotated, that the disk will rotate about the rod. It admits that the rod was put down through the disk on to the centre of the can lid, and held there while the disk was slid downward along the rod on to the lid. It asserts that then the rod D was held no longer, but was released, and that the disk was then "moved back and forth" by its loop-handle, be-
354 cause the rod D is secured to the disk and its handle outside of the axial line of the handle, when the tool is "moved back and forth;" the rod D describes arcs around the handle C; that is to say, the rod D is carried around by the disk A, and therefore

the disk A does not revolve around it. Applicant, in his argument, assumes what the patent does not assert, and what the tool has no construction to effect, or capable, practically, of effecting, namely, that the rod D is held down while the disk is "moved back and forth. This is the new matter.

2dly. The new matter consists in the statement that the tool or disk is revolved about D.

3dly. The new matter consists in the statement that the tool revolves at all. There is no statement in the patent that it ever made, or was intended to make, a complete revolution about its own axis, about D, or about anything, all the claims are rejected on patent to Bostwick before cited. The 4th and 5th claims are rejected on English Patent No. 2708, A. D. 1862. Applicant may avoid the English patent by inserting "independently movable" before "rod" in the 4th claim, and "independently" before "movable" in the 5th claim.

S. W. STOCKING, *Examiner.*
Per WOLCOTT, 3 *Ass't.*

Endorsed: 13,690. Rej. May 12, '79.

13,690. *Amendment May* 15, '79.

355 Hon. COMM'R OF PATENTS.

SIR: I amend the application of A. Barker for soldering and unsold[er]ing can-caps, re-issue filed April 29, '79, as follows: By inserting before *rod D*, cl. 4, the words "independently movable," and before movable, claim 5, the word "independently." Applicant does not propose to argue the question of new matter with the Examiner, and as the latter has announced his intention to reject, appeal is herewith filed. Applicant will amend no further.

Resp'y, R. D. WILLIAMS, *Att'y.*

13,690. *Letter June* 4, '79.

ROOM NO. 103, DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OEFICE,
WASHINGTON, D. C., *June 4th*, 1879.

13,690.

A. BARKER,
Care of Rich'd D. Williams, Balt'o, Md.

Soldering Devices, Apr. 29, '79.

356 There is a figure of the drawing which is not numbered, and has no general description.

It seems that the word "and," or words "and then," should be inserted in the first sentence of page 3, after "melted," to complete the sentence.

S. W. STOCKING, *Ex'r.*

13,690. *Amendment June* 10, '79.

Hon. Comm'r of Patents.

Sir: I amend the application of A. Barker for re-issue soldering device, filed 1879.

By inserting on p. 1, line 5 from bottom:

Fig. 4 is a plan view of the disk.

By inserting after *melted*, line 6, p. 3, the conjunction "and."

Resp'y, R. D. WILLIAMS, *Att'y.*

357 13,690. 1879. Div. 14.

No. 8781.—Re-issue.

Abel Barker, Assignor to Edward M. Lang, of Wyoming, County of Luzerne, State of Pennsylvania.

Soldering and Unsoldering Can-Caps.

Rec'd April 15, 1879.
Petition, April 15, 1879.
Affidavit, April 15, 1879.
Specification, April 15, 1879.
Drawing, April 15, 1879.
Abstract of title, April 29, 1879.
Old patent, Re-issue No. 6846, Jan'y 11, 1876.
Cert. dep., No. 103,125, May 17, 1870.
1. Cash, $30, April 19, 1879.
Examined by the board, June 10, 1879, and S. W. Stocking, Ex'r.
2. Issue June 11, '79, F. A. Seely.
Patented May 17, 1870.
Re-issued Jan. 11, 1876.
3. Re-issued July 1, 1879.
Circular, June 11, 1879.

RICHARD D. WILLIAMS,
Baltimore, Md.

358 United States Patent Office.

Abel Barker, of Wyoming, Pa., assignor to Edward M. Lang.

Improvement in Soldering Devices.

Specification forming part of Letters Patent No. 103,125, dated May 17, 1870; Re-issue No. 6,846, dated January 11, 1876; Re-issue No. 8,781, dated July 1, 1879; application filed April 15, 1879.

To all whom it may concern:

Be it known that I, Abel Barker, of Wyoming, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful improvements in soldering machines; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical central sectional view of the device; Fig. 2,

359

A. BARKER,

Assignor to E. M. LANG.

Soldering Device.

No. 8,781. Reissued July 1, 1879.

No. 250.
W^m Murray et al
v.
Mallory et al
Page 359

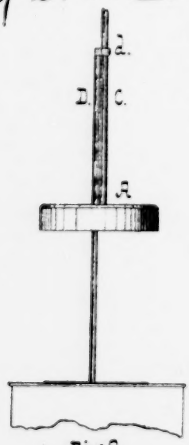


Fig: 3.

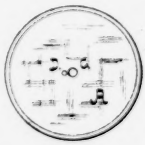


Fig: 4.

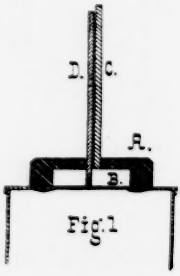


Fig: 1

Fig: 2.

Witnesses,
W. A. Betham.
R. L. C. Barclay.

Inventor
- ABEL BARKER -
by
R. D. Williams.
Attorney.

5. The disk or tool A, with the recess B in its under side, in combination with and mounted upon the independently-movable rod or wire D, as set forth.

ABEL BARKER.

Witnesses:
G. M. RICHART.
JAS. L. POLEN.

(Here follows diagram, marked page 359.)

360 1879.

CONTENTS.

Application papers.
1. Rej., Apr. 30, '79.
2. Am'd't, May 8, '79.
3. Rej., May 12, '79.
4. Am'd't, May 15, '79.
5. Appeal to Board, May 15, '79.
6. Appeal rec'd, May 17, '79.
7. Answer to appeal, Monday, May 19, '79.
8. Examiner reversed, June 4, '79.
9. Letter, June 4, 1879.
10. Am'd't, June 10, '79.
113 Sheet-metal ware-making soldering irons.

TITLE—Improvement in Soldering Devices.
Ex'd: H. M. H. E. A. M.

361 *Complainants' Exhibit "Board of Examiners."*

(65.)

DEPARTMENT OF THE INTERIOR, UNITED STATES PATENT OFFICE.

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the records of this office of the decision of the examiners-in-chief in the matter of the application of A. Barker *ex parte* for method of Soldering and Unsoldering Can Caps.

In testimony whereof, I, W. H. Doolittle, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this 11th day of September, in the year of our Lord one thousand eight hundred and seventy-nine, and of the Independence of the United States the one hundred and fourth.

[SEAL OF THE PATENT OFFICE.] W. H. DOOLITTLE,
Acting Commissioner.

362 No. 5,351. U. S. PATENT OFFICE. MAY 29, 1879.

Before the Examiner-in-Chief, on Appeal.

Application of Abel Barker for a 2d re-issue of patent No. 103,125, granted May 17, 1870. Improved method of Soldering and Unsoldering Can Caps.

The claims in controversy are:

1. "A rod adapted to hold the can cap or lid in place, in combination with a soldering iron mounted upon [and arranged to be rotated about said rod,] substantially as described."

2d. "A rod adapted to hold the can cap or lid in place in combination with a soldering iron sliding upon said rod, [and adapted to be rotated about it,] as set forth."

The brackets indicate the alleged new matter in the claims.

There is also an allegation of new matter in the specification to the same effect.

The clause in which the matter objected to occurs [in brackets] is as follows:

"In connection with the handle, I use the small rod or wire D which passes through the soldering iron or disk A, so as to [admit of the latter's being rotated about or] slid up and
363 down upon the rod."

To determine whether any departure from, or enlargement of, the intent and purport of the original invention has been made, a careful reading of the original patent in connection with the drawing is necessary. What was the "*modus operandi*" as contemplated by the inventor originally?

He states it in the following language, (after describing the construction of the device, and the filling of the can:) "The cover is then to be carefully laid in place on the can, and new solder or material placed around the lid if necessary. The rod D is pushed down through the disk and placed upon the center of the cover to hold it. The heated disk is then to be pushed down in contact with the solder or sealing material till it is melted, then turned back and forth till the solder is spread evenly around the lid; the disk is then to be withdrawn, with the rod D still pressed upon the lid, till the solder or sealing material sets or hardens, when the operation is completed."

This description is rather more clear and circumstantial than usual, and leaves no doubt as to the intended mode of pro-
364 cedure. The rod D, "a small rod or wire," has several functions. First, it is designed to pass through the soldering disk, and be placed "upon the centre of the cover to hold it," while the disk itself is free to move upon it, either up or down or angularly; the second function of the rod being that of a guide, to steady and direct the heated disk as it is applied; the third function of the rod is that of a pivot, about which the disk is "turned back and forth till the solder is spread evenly around

the lid." This turning of the disk back and forth can mean but one thing—angular motion about the rod—since the rod is to be strictly held upon the centre of the lid to confine itself in place, and any lateral motion would be impossible "with the rod D, still pressed upon the lid," as well as useless for "spreading," nor would the phrase "turned back and forth" correctly designate a lateral or reciprocating motion. There is no difficulty in the turning back and forth, as the Examiner seems to fancy. The human hand may be turned back and forth through nearly an entire revolution by reason of a similar mechanism—the radius and ulna—an amount of angular motion abundantly sufficient for applicant's pur-
365 pose, and properly characterized as rotary; the term "rotated," like "turned," (the one originally used,) not necessarily, in common parlance, calling for *continuous* revolution, but merely indicating motion about a fixed point.

We regard the hypothesis and the diagram of the Examiner as far-fetched and violent, and having no warrant in anything found in the orignal patent. Had *applicant* endeavored to introduce such a theory, supporting it by such departures from the original description as the change of the specific word "turned" into "moved," he would justly have laid himself open to the strictures of the Examiners as to "new matter."

We see no motive in this application, except the laudable one of attempting to make still clearer that which has shown itself, in its experience in the office, to be capable of misconstruction, and of getting rid of certain objectionable new matter introduced by the last re-issue. The applicant was clearly the pioneer in this ingenious and expeditious mode of sealing, which may be varied in many ways. The patent of Bostwick, being subsequent in
366 date of filing and issue, has no pertinency as a reference, as per supreme court decision (D. C.) in *Ex parte* "Platts and Walden," 150 G., 827. We must hold the applicant to be entitled to what he claims, and accordingly reverse the Examiner's decision.

H. H. BATES,
R. L. B. CLARK,
V. D. STOCKBRIDGE,
Examiners-in-Chief.

367 *Defendant's Exhibit "Bostwick Re-issue Record."*

Department of the Interior, Unites States Patent Office.

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the files of this office, of the file wrapper and contents, in the matter of the re-issue letters patent granted Jabez A. Bostwick, ass'or to E. M. Lang & Co., October 29th, 1878, No. 8466, for improvement in soldering irons.

In testimony whereof, I, W. H. Doolittle, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto

affixed, this seventeenth day of March, in the year of our Lord one thousand eight hundred and eighty, and of the Independence of the United States the one hundred and fourth.

[SEAL OF PATENT OFFICE.] W. H. DOOLITTLE,
Acting Commissioner.

368 $30 *Ch'k.*

NEW YORK, *Sept. 2d*, 1878.

To the Commissioner of Patents:

SIR: Find herewith application for re-issue of the patent granted to J. A. Bostwick, June 21st, 1870, for soldering irons, accompanied by certified copy of said patent, (the original having been lost,) affidavit of loss, and abstract of title.

Also, check for $30 in payment of fee.

Yours truly, DAVID A. BURR.

Drawing forwarded in separate parcel.

Endorsed: U. S. Patent Office, Sept. 3, 1878.

369 *Petition.*

To the Commissioner of Patents:

Your petitioner, a resident of the city and State of New York, prays that he may be allowed to surrender the letters patent for an improvement in soldering irons, granted him June 21st, 1870, whereof E. M. Lang & Company, of Portland, Maine, on whose behalf and with whose assent this application is made, are now sole owners by assignments, and that letters patent may be reissued to the said E. M. Lang & Co. for the same invention upon the annexed amended specification. Accompanying this petition is an abstract of title, duly certified, as required in such cases.

J. A. BOSTWICK.

The undersigned, assignees of the entire interest in the above-mentioned letters patent, hereby assent to the accompanying application.

E. M. LANG & CO.

370 *Specification.*

To all whom it may concern:

Be it known that I, Jabez A. Bostwick, of the city, county, and State of New York, have invented a new and useful improvement in Soldering Irons, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a view in perspective of my improved soldering iron and of a cap placed upon a metallic can to be soldered.

Figure 2 is an elevation of the guiding or pivotal presser rod; and

Figure 3 is a sectional view of the soldering iron placed upon the cap so as to solder the same, with the pivotal pressure rod in place to hold down the cap and guide the iron in its operation.

My invention relates to the construction of a tool for soldering the caps upon the tops of metallic cans, which will admit of more easy and expeditious manipulation in performing the operation than the tools heretofore employed for this purpose.

It consists in the combination of an iron, adapted to produce, when heated, a proper flow of solder along the joint of a
371 can cap, with a central rod, about which it may revolve, and which will serve the two-fold purpose—*first*, of a pivot to limit and guide the soldering iron in its proper movement during the process of soldering; and, *second*, of a weight to press and hold down the cap during the operation and until it is fixed and retained by the solder.

In the accompanying diagram A is a soldering iron, consisting of a ring or cylinder of metal made thick to retain heat, and provided with a lower edge or face *a* beveled and adapted to rest upon and follow the joints to be soldered, and to produce a proper flow of solder in and upon the same.

This soldering edge *a* may be continuous and annular to embrace the cap, or it may form merely the arc of a circle or be otherwise broken away to bear upon the joint at one or two points thereof instead of continuously.

The iron is provided with a handle B for removing it from can to can, or to and from the furnace, and by means whereof its movement about its central pivot rod and along the joint to be soldered is effected. This handle is guarded as usual with wood or other non-conductors of heat.

C is a rod made heavy to serve as a weight to retain the
372 cap in place while being soldered. Its upper end is of such diameter as to fit loosely within the upper annular portion or collar of the soldering iron, and its lower end is enlarged to form a shoulder *d*, which, when the rod is lifted, shall engage the counterpart projection *e* formed by the collar of the iron A.

In the operation of soldering with this tool, the weight, or presser rod C, is placed centrally upon the cap which is to be secured, and the iron B, properly heated, is slipped over the rod, and being brought thereby to bear upon the joint is quickly turned, or revolved, about the rod as a pivot so as to melt the solder at the joint and flow it to every part of the seam. So soon as this is accomplished the iron is lifted off from the presser rod C and either slipped over a second rod placed ready in position upon the next can, or, if necessary, is reheated for the purpose. In the meantime the presser-rod, remaining as a weight upon the can cap which has been operated upon, will retain it in position until the solder of the joint is set and the cap thereby secured. The process of soldering may thus be very rapidly and effectively carried on without the need of a skilled workman.

The central rod thus serves not only as a guide to conduct the heated iron directly to the joint, but also as a pivot to deter-
373 mine and facilitate its ready movement along the joint, and

as a loose weight to hold the cap in place until it is secured by the cooling of the solder.

If the presser-rod C be lifted instead of the soldering iron proper, the shoulder *d* on the rod engaging the offset *e* of the collar within the iron, will serve to take up the latter so that it may be thereby transferred to another can cap, a number of cans may be in this manner soldered at one heat of the iron with but one presser-rod, but in such case the operator must first, after lifting the iron from the joint, pause a moment to allow the joint to set before lifting the rod itself from the can.

I claim as my invention—

1. A tool for soldering the caps on cans, consisting of a soldering iron revolving about a central pivotal rod which is made to rest upon and steady the cap during the operation of soldering.

2. The combination of a hollow iron for soldering caps on cans with a separate and inclosed weight for steadying the cap on the can during the operation of soldering.

J. A. BOSTWICK.

Witnesses:
JAS. W. HALE.
DAVID A. BURR.

374 *Oath.*

STATE OF NEW YORK, *City and County of New York*, } *ss:*

J. A. Bostwick, the above-named petitioner, being duly sworn, deposes and says that he verily believes that, by reason of an insufficient or defective specification, his aforesaid letters patent are inoperative or invalid; that the said error has arisen from inadvertence, accident, or mistake, and without any fraudulent or deceptive intention, to the best of his knowledge and belief; that E. M. Lang and Company are the sole owners of said letters patent, and that this application is made on the behalf and with the consent of said E. M. Lang and Co.; and that he verily believes himself to be the first and original inventor of the improvement set forth and claimed in this amended specification.

J. A. BOSTWICK.

Sworn to and subscribed before me, this tenth day of August, 1878.

[L. S.] JAS. W. HALE,
Public Notary, 69 *Wall St.*

375 *Oath as to the Loss of Letters Patent.*

CITY AND COUNTY OF NEW YORK, *ss:*

J. A. Bostwick, of said county, being duly sworn, doth depose and say that the letters patent No. 104,412, granted to him, and bearing date on the 21st day of June, 1870, have been either lost or destroyed; that he has made diligent search for the said letters pat-

ent in all places where the same would probably be found, if existing, and that he has not been able to find them.

J. A. BOSTWICK.

Subscribed and sworn before me, this tenth day of August, 1878.

[L. S.] JAS. W. HALE,
Public Notary, 69 *Wall St.*

Endorsed: 13,070. U. S. Patent Office, Sep. 3, 1878.

376 United States Patent Office.

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the Digest of this office of all assignments, agreements, licenses, powers of attorneys, and other instruments of writing, found of record under or relating to letters patent granted to Jabez A. Bostwick, June 21, 1870, No. 104,412, for "Soldering Iron."

In testimony whereof, I, W. H. Doolittle, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this tenth day of October, in the year of our Lord one thousand eight hundred and seventy-eight, and of the Independence of the United States the one hundred and third.

[L. S.] W. H. DOOLITTLE,
Acting Commissioner.

377 Assignors—J. A. Bostwick.

Assignees—Edw'd M. Lang and Geo. Burnham, Jr., copartners, trading as E. M. Lang & Co., of Portland, Me.

Date of assignment—July 30, '78.

Date of record—Sept 4, '78.

Invention—Soldering iron. June 21, '70. 104,412.

Territory assigned—All his right in said letters patent for the full term for which the same are or may be granted.

Liber—J 23.

Page—125.

Endorsed: 13,070. U. S. Patent Office. Oct. 11, 1878.

378 13,070.—*Re issue.*

ROOM NO. 103, DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
WASHINGTON, D. C., *Oct. 15th*, 1878.

J. A. BOSTWICK,
Care David A. Burr, 30 Park Place, N. Y. City.

Soldering Irons, Oct. 11, 1878.

Fig. 2 of the drawings is described as being an elevation of the guide-rod, whereas it is a sectional view of guide-rod and iron. The figures of the drawings are numbered wrong. There is evidently a mistake in the last five lines of description on page 4 which should

be rectified. The 2d claim is rejected on patent to A. Barker, No. 103,125, May 17, 1870, Soldering Irons.

M. D. PECK, *Acting Examiner.*
Per WOLCOTT, *3d Ass't.*

Endorsed: 13,070. Rej. Oct. 15, '78.

379 NEW YORK, *August 27th*, 1878.

To the Commissioner of Patents.

The undersigned having, on or about the 10th day of August, 1878, made application for a re-issue of the letters patent granted to him June 21st, 1870, for an Improvement in Soldering Irons, hereby appoints David A. Burr, of 30 Park Place, in the city and State of New York, his attorney, with full power of substitution and revocation, to prosecute said application, to make alterations and amendments therein, to receive the patent, and to transact all business in the Patent Office connected therewith, provided the assignees concur.

J. A. BOSTWICK.

The undersigned assignees of the entire interest in the above-mentioned letters patent hereby assent and concur in the appointment of David A. Burr as attorney in the matter of the foregoing application.

E. M. LANG & CO.

PORTLAND, ME., *August 29th*, 1878.

Endorsed: Power of attorney. U. S. Patent Office, Sep. 3, 1878.

380 NEW YORK, *October* 16th, 1878.

To the Commissioner of Patents.

SIR: In the matter of the application of J. A. Bostwick for *re-issue* of his patent for soldering irons, filed Oct. 11th, '78, I beg leave to amend the drawings by changing the ordinal of Figure 2 to 3, and by designating the view in elevation of the guide rod detached, as Figure 2; also to amend the specification by striking out the words "up into contact with the offset at *c*, then" from the 12th and 13th lines of the 4th page.

It is respectfully submitted that the patent to A. Barker, No. 103, of May 17th, 1870, referred to in the official letter of 15th inst., does not anticipate the 2d claim made in present application by Mr. Bostwick, for the following reasons:

The wire rod which is in Barker's patent projects through the soldering disk, is in no sense *a weight* for any practical purpose. Its proportions, as given in his model and drawings and as referred to in the specification, show conclusively that it could not subserve the functions of the weight shown and described in the
381 present application; moreover, Bostwick's weight covers the whole, or very nearly the whole, top of the cap, so as to bear

evenly thereon, transmitting pressure equally to all parts of its joints. The wire rod in Barker's patent bears upon the cap at a single point only, upon one side of the centre, so that its tendency is to tip the cap; again, in so far as Barker's wire rod may be regarded as a weight, it is not a *separate* weight such as described in Bostwick's specification and claim, but it is so attached and connected with the soldering disk through which it passes, and with its support secured to that disk, as to be virtually irreparable therefrom. If the disk be removed, the wire rod must go with it. It cannot be left and remain to perform the office of holding the cap upon the joint whilst the iron is removed to solder another cap, as with Bostwick's invention, and hence it does not meet Bostwick's specific claim for a "separate and inclosed weight."

Requesting a consideration of the case,

I remain, yours truly,

DAVID A. BURR, *Att'y.*

382 13,070. 1878. Re-issue. No. 8466.

JABEZ A. BOSTWICK, Ass'or to E. M. LANG & Co., of Portland, Maine, of New York, county of New York, State of New York.

Soldering Irons.

Rec'd Sept. 3, 1878.
Petition, Sept. 3, 1878.
Affidavit, Sept. 3, 1878.
Specification, Sept. 3, 1878.
Drawing, Sept. 3, 1878.
Abstract of title, Oct. 11, 1878.
Cert. copy old patent, No. 104,412, June 21, 1870.
Cert. dep.
1. Cash, $30, Sept. 3, 1878.
Examined Oct. 18, '78; M. D. Peck.
2. Issue Oct 19, '78; F. A. Seely.
Patented June 21, 1870.
Re-issued Oct. 29, 1878.
3. Circular Oct. 19, 1878.

DAVID A. BURR,
30 *Park Place, N. Y. City.*

383 UNITED STATES PATENT OFFICE.

JABEZ A. BOSTWICK, OF NEW YORK, N. Y., ASSIGNOR TO E. M. LANG & CO., OF PORTLAND, MAINE.

Improvement in Soldering Irons.

Specification forming part of Letters Patent No. 104,412, dated June 21, 1870; Re-issue No. 8466, dated October 29, 1878; application filed September 3, 1878.

To all whom it may concern:

Be it known that I, Jabez A. Bostwick, of the city, county, and

State of New York, have invented a new and useful improvement in Soldering Irons, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a view in perspective of my improved soldering iron, and of a cap placed upon a metallic can to be soldered. Fig. 2 is an elevation of the guiding or pivotal presser-rod; and Fig. 3 is a sectional view of the soldering iron, placed upon the cap so as to solder the same, with the pivotal presser-rod in place to hold down the cap and guide the iron in its operation.

My invention relates to the construction of a tool for soldering the caps upon the tops of metallic cans which will admit of more easy and expeditious manipulation in performing the operation than the tools heretofore employed for this purpose.

It consists in the combination of an iron adapted to produce, when heated, a proper flow of solder along the joint of a can-cap, with a central rod about which it may revolve, and which will serve the twofold purpose, first, of a pivot to limit and guide the soldering-iron in its proper movement during the process of soldering; and, second, of a weight to press and hold down the cap during the operation, and until it is fixed and retained by the solder.

In the accompanying drawing A is a soldering iron, consisting of a ring or cylinder of metal made thick to retain heat, and provided with a lower edge or face, *a*, beveled, and adapted to rest upon and follow the joint to be soldered, and to produce a proper flow of solder in and upon the same. The soldering edge *a* may be continuous and annular to embrace the cap, or it may form merely the arc of a circle, or be otherwise broken away to bear upon the joint at one or two points thereof, instead of continuously. The iron is provided with a handle, B, for removing it from can to can or to and from the furnace, and by means whereof its movement about its central pivot rod, and along the joint to be soldered is effected. This handle is guarded, as usual, with wood or other non-conductor of heat.

C is a rod, made heavy to serve as a weight to retain the cap in place while being soldered. Its upper end is of such diameter as to fit loosely within the upper annular portion or collar of the soldering iron, and its lower end is enlarged to form a shoulder, *d*, which, when the rod is lifted, shall engage the counterpart projection *c*, formed by the collar of the iron A.

In the operation of soldering with this tool, the weight or presser-rod C is placed centrally upon the cap which is to be secured, and the iron B, properly heated, is slipped over the rod, and, being brought thereby to bear upon the joint, is quickly turned or revolved about the rod as a pivot, so as to melt the solder at the joint and flow it to every part of the seam. So soon as this is accomplished the iron is lifted off from the presser-rod C, and either slipped over a second rod placed ready in position upon the next can, or, if necessary, is reheated for the purpose. In the meantime the presser-rod, remaining as a weight upon the can cap which has

384

J. A. BOSTWICK.

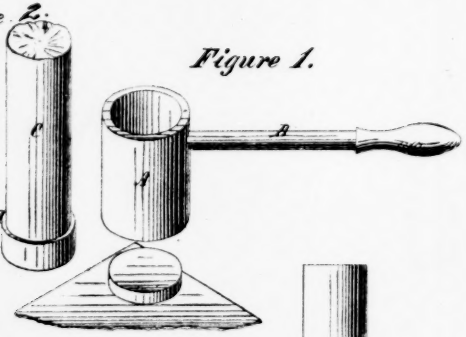
Assignor to E. M. LANG & Co.

Soldering Iron.

No. 8,466. Reissued Oct. 29, 1878.

Figure 2.

Figure 1.



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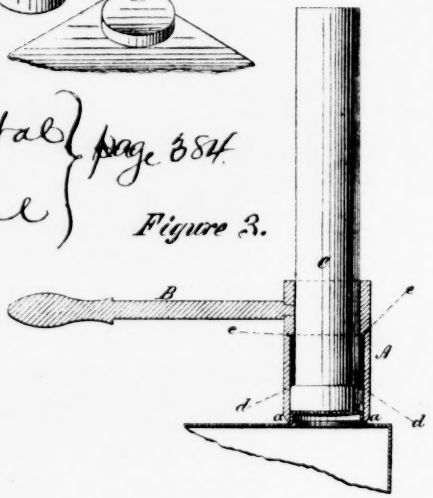
page 384

Figure 3.



Witnesses:

George W. Miath
James C. Tarney

Inventor.

J. A. Bostwick
By David A. Burr
Atty.

been operated upon, will retain it in position until the solder of the joint is set and the cap thereby secured. The process of soldering may thus be very rapidly and effectively carried on without the need of a skilled workman.

The central rod thus serves not only as a guide to conduct the heated iron directly to the joint, but also as a pivot to determine and facilitate its ready movement along the joint, and as a loose weight to hold the cap in place until it is secured by the cooling of the solder.

If the presser-rod C be lifted instead of the soldering iron proper, the shoulder *d* on the rod, engaging the offset *e* of the collar within the iron, will serve to take up the latter, so that it may be thereby transferred to another can cap. A number of cans may be in this manner soldered at one heat of the iron with but one presser-rod; but in such case operator must first, after lifting the irom fron the joint, pause a moment to allow the joint to set before lifting the rod itself from the can.

I claim as my invention—

1. A tool for soldering the caps on cans, consisting of a soldering iron revolving about a central pivotal rod, which is made to rest upon and steady the cap during the operation of soldering.

2. The combination of a hollow iron for soldering caps on cans with a separate and inclosed weight for steadying the cap on the can during the operation of the soldering.

J. A. BOSTWICK.

Witnesses:
JAS. W. HALL.
DAVID A. BURR.

(Here follows diagram, marked page 384.)

385 1878.

CONTENTS.

Application papers.
1. Rej., Oct. 15, 1878.
2. Am'd't, Oct. 17th, '78.
113 sheet-metal ware, making soldering irons.

TITLE—Improvement in soldering irons.
Ex'd: J. A. W. M. McK.

386 *Defendants' Exhibit "Carson."*

Department of the Interior, United States Patent Office.

To all persons to whom these persons shall come, Greeting:

This is to certify that the annexed is a true copy from the bound volumes of the library of this office of the specification and drawing in the matter of the English letters patent granted Samuel Carson, November 4th, 1845, No. 10,922, for preserving eggs.

In testimony whereof, I, W. H. Doolittle, Acting Commissioner

of Patents, have caused the seal of the Patent Office to be hereunto affixed, this seventeenth day of March, in the year of our Lord one thousand eight hundred and eighty, and of the Independence of the United States the one hundred and fourth.

[SEAL OF PATENT OFFICE.] W. H. DOOLITTLE,
Acting Commissioner.

387 A. D. 1845. No. 10,922.

Preserving Eggs. Carson's Specification.

To all to whom these presents shall come, I, Samuel Carson, of Norwood, in the county of Surrey, gentleman, send greeting:

Whereas her present Most Excellent Majesty Queen Victoria, by her royal letters patent, under the great seal of Great Britain, bearing date at Westminster, the fourth day of November, in the ninth year of her reign, did, for herself, her heirs and successors, give and grant unto me, the said Samuel Carson, my ex'ors, adm'ors, and assigns, her especial license, full power, sole privilege, and authority, that I, the said Samuel Carson, my ex'ors, adm'ors, and assigns, or such others as I, the said Samuel Carson, my ex'ors, adm'ors, or assigns, or such others as I, the said Samuel Carson, my ex'ors, adm'ors, or assigns, should at any time agree with, and no others, from time to time, and at all times during the term of years therein expressed, should and lawfully might make, use, exercise, and vend, within England, Wales, and the town of Berwick-upon-Tweed, my invention of "Improvements in Treating
388 Eggs for the Purposes of Food," in which said letters patent is contained a proviso that I, the said Samuel Carson, shall cause a particular description of the nature of my said invention, and in what manner the same is to be performed, to be enrolled in her said Majesty's high court of chancery within six calendar months next and immediately after the date of the said in part recited letters patent, as in and by the same, reference being thereunto had, will more and fully at large appear.

Now know ye, that in compliance with the said proviso, I, the said Samuel Carson, do hereby declare that the nature of my said invention, and the manner in which the same is to be performed, are fully described and ascertained in and by the following statement thereof, reference being had to the drawings hereunto annexed, and to the figures and letters marked thereon, that is to say:

My invention consists *consists* in packing eggs in cases from which the atmospheric air is withdrawn, and partially cooking the
389 eggs so packed, by which means eggs may be preserved for the purposes of food for a length of time.

The eggs treated, according to my invention, may be in the shells, or the shells may removed, be as hereafter explained. It is well known that in cooking eggs that they require a boiling heat to be applied for only two to three minutes, if it be desired that the eggs should be eaten in what is called the soft state. If the boiling heat be kept

up for more than that time the whole of the interior of the eggs quickly becomes boiled hard, as it is called or set. Hence it is important in treating eggs to preserve them, that the means resorted to should be such that, although partially cooked in the process, they should still require to be further boiled for a minute or so when to be eaten, and according to my invention this desirable result may be readily obtained. Figure 1 is a section of a vessel such as I employ for preserving eggs, and it is similar to those used for preserving meat by the aid of vacuum; and I would at once state that I make no claim to such vessel, nor the obtaining a
390 vacuum therein, my invention consisting in adapting such description of vessels, and a process of obtaining vacuum therein to the purposes of preserving eggs. Figure 2 shows a side view of apparatus used by me in obtaining a vacuum in the metal cases, and for sealing or closing the opening into such vessels when the vacuum has been obtained. Figure 3 shows a section of the upper part of one of the vessels, showing how the case is closed. Figure 4 is a plan of the vessel. Figure 5 shows an underside view of part of the apparatus used for obtaining a vacuum. Figure 6 shows the tool used for soldering and unsoldering the portion of pipe to the cover of the case; and Figure 7 shows a plan and section of a tool for melting the solder in the groove, where the cover of the case or vessel is fastened.

The manner of proceeding is as follows: I take fresh eggs and puncture a small hole through one end by a needle point, and in packing the eggs in the case I keep such hole upwards, and having filled the case I solder on the lid *a*, which has a short tube *b* soldered thereto. The case thus filled is placed on the table *c*, and raised up by the treadle *d*, so that the end of the tube *e* enters the tube
391 *d*; this tube, *e*, has a quantity of solder around it, which is melted by embracing it with the heated tool, Figure 6, and thus an air-tight joint is produced between the tube *d* and *e*. The upper end of the tube *e* is closed, and this tube has two pipes, *f* and *g*, opening into it, each pipe having a stop-cock. The pipe *f* leads to an air pump or other means of obtaining vacuum, and the pipe *g* is in connection with a steam boiler or generator, producing steam of about one pound to one pound and a half on the inch, over the atmosphere. Vacuum to the extent of twenty-seven inches of mercury is to be obtained, when the stop-cock in *f* is to be closed and the steam-cock opened, so that steam rushes in and fills the case, but partially condensing when coming in contact with the case and its contents. To remove the water so formed, a drop of solder covering a small hole in the bottom of the case, as at *z*, is removed by a hot iron, and allowed to remain off till steam is seen to issue, when it is again closed, and at the time of again closing the
392 aperture *z* I close the steam-cock, and the exhaustion-cock in *f* I open, and vacuum is again obtained; the cock in *f* is then to be closed, and the cock in *g* opened, and the steam allowed to flow in again for about fifteen seconds, when the tube *d* is to be

pinched closely together by a pair of pincers, the steam cock is to be closed, and then by care the solder which has closed the junction of the pipes *d* and *e* may be caused to be melted (by the tool above mentioned, and shown at Figure 6,) and the same caused to run into the tube *d*, by which the tube, and consequently the case or vessel will be sealed air-tight. The eggs thus treated will, when taken out of the case or vessel, require to be put into boiling water for about one minute, and they will be found to be similar to what a fresh egg would, if boiled for about two and a half or three minutes. If the eggs are not to have their shells, then the eggs are to be broken, and the contents placed in the vessel or case, and the same process resorted to as before described, except in this instance, very little condensation takes place, and the hole *z* is not required.

393 Having thus described the nature of my invention, and the best means I am acquainted with for performing the same, I would have it understood that I do not confine myself to the details herein described so long as eggs are preserved by placing them in vessels or cases and then removing the atmospheric air, and causing the cases to be closed air tight, as herein described.

In witness whereof, I, the said Samuel Carson, have hereunto set my hand and seal, this 4th day of May, in the year of our Lord one thousand eight hundred and forty-six.

SAMUEL [L. S.] CARSON.

And be it remembered that on the fourth day of May, in the year of our Lord, 1846, the aforesaid Samuel Carson came before our said Lady the Queen, in her chancery, and acknowledged the specification aforesaid, and all and everything therein contained and specified in form above written. And also the specifica-

394 tion aforesaid was stamped according to the tenor of the statute made for that purpose.

Enrolled the fourth day of May, in the year of our Lord one thousand eight hundred and forty-six.

Ex'd: E. A. M. H. M. H.

(Here follows two diagrams, marked page 394.)

395 *Defendants' Exhibit "William Faust."*

Department of the Interior, United States Patent Office.

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the files of this office of the specification and drawings, in the matter of the application of William Faust, filed December 22, 1868, for Can Opener.

In testimony whereof, I, W. H. Doolittle, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this thirteenth day of March, in the year of our Lord one

A.D 1845 Nov 6. N° 10.922.
CARSON'S SPECIFICATION.

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FIG 6.

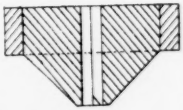

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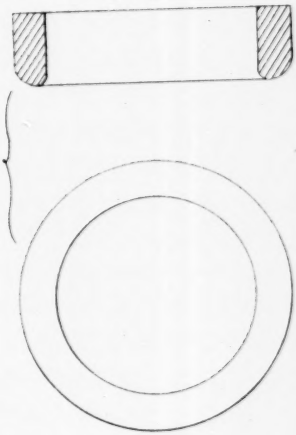
FIG 7.



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thousand eight hundred and eighty, and of the Independence of the United States the one hundred and fourth.

[SEAL OF PATENT OFFICE.] W. H. DOOLITTLE,
Acting Commissioner.

396 *William Faust, of Pittsburgh, Penna. Rejected Application. Filed Dec'r 22, 1868. Can Opener.*

To all whom it may concern:

Be it known, that I, William Faust, of the city of Pittsburgh, in the county of Allegheny, and State of Pennsylvania, have invented a new and useful Can Opener, and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings making part of this specifications.

The object of this invention is to provide a cheap and practical instrument for opening the cans in which so many varieties of food are now put up and preserved by the application of heat to the cap or lid of the can so as to melt the solder with which it is fastened, and thus loosen and remove the lid without injury either to the can or its contents. These can openers may be made of any or all of the materials suitable for such purposes, but I usually make them of cast iron. The handle A may be cast as a part of the in-
397 strument in the manner shown by the drawings, or it may be made by inserting a wrought iron or other rod or iron of suitable length and size in the mould so as to form a handle by its connection with the cast metal in the manner well known to all manufacturers. On the end of this rod or wire a wooden handle, or any metallic device or instrument, may be placed which suits the maker's taste. The body B of the opener should correspond in size as nearly as may be with the lids of the cans in use. The one shown in the drawings is about two and a quarter inches in diameter on one side, *a*, for the ordinary fruit can, and about an inch and a half in diameter on the opposite side *b*, nearly the size of the lids on the common oyster can. The drawings also show the body B, made round with the sides C, beveled or tapered so as to give the two sizes *a* and *b*, and about three-fourths of an inch in depth. Of course, any other shape or any other method of uniting the two sizes may be adopted, if preferred. If cans are made with square openings, it would be desirable to have the instrument made on the same shape. Through this round body B I form the opening C, so that the operator can look through
398 and see when the lid or cap is ready to be removed. The body might be made with a recess on either side to fit the lid or cap, but I think it is better and more convenient, both in making and using, in the manner I have shown. Both faces, *a* and *b*, are slightly beveled and thus have a sharper, better edge to catch against the lid of the can in shoving or moving it off. Now, in using this instrument the body B is put in the fire for two or three

minutes till it is hot enough to melt the solder, it is then laid over the lid or cap of the can, and being pressed down, slightly melts the solder all around the lid at once, thereby loosening the lid so that it may instantly be shoved or moved away from the opening of the can without the use of any other instrument and without injury to the can—which may thus be used again—or to its contents. This instrument, if made of copper, may easily be arranged and used as a soldering iron to fasten the lids of the cans—as well as to open them.

Having thus described the nature and use of my invention what I claim as new, and desire to secure by letters patent,
399 is—

As an article of manufacture, a can opener, made substantially as shown and described.

WILLIAM FAUST.

Witnesses:
J. H. BETOWN.
T. STOBRIDGE.

Ex'd: J. A. W., M. McK.

(Here follows diagram, marked page 399.)

400 *Defendants' Exhibit "George F. Stone."*

Department of the Interior, United States Patent Office.

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the files of this office of the specification and drawings in the matter of the application of George F. Stone, ass'or to self and Jesse H. Whitehurst, filed September 17th, 1866, for Soldering Instrument.

In testimony whereof, I, W. H. Doolittle, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed, this thirteenth day of March, in the year of our Lord one thousand eight hundred and eighty, and of the Independence of the United States the one hundred and fourth.

[SEAL OF PATENT OFFICE.] W. H. DOOLITTLE,
Acting Commissioner.

401 GEORGE F. STONE, OF PHILADELPHIA, PA., ASS'OR TO SELF AND JESSE H. WHITEHURST, OF BALTIMORE, MD. FORFEITED APPLICATION. FILED SEPT. 17, 1866.

Improved Soldering Instrument.

To all whom it may concern:

Be it known, that I, G. F. Stone, of Philadelphia, Pennsylvania, have invented an Improved Soldering Instrument, and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

W. Faust.

Can Opener.

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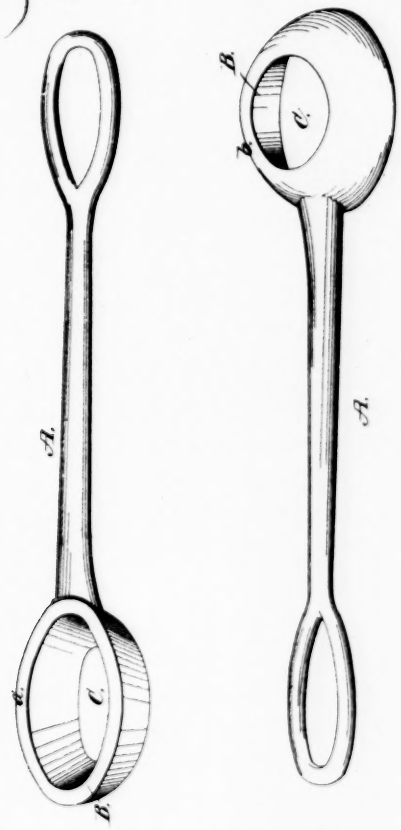
v.
Mallony et al

Filed Dec. 22, 1868.

page 399.



Witnesses:

J. H. Baldwin

T. Stebbins

Inventor:

William Faust

My invention consists of certain devices, fully described hereafter, whereby the melted caps of preserving cans and other vessels may be quickly and effectually soldered to the tops of the cans; and my invention further consists of a ring of solder which fits the joint to be soldered so as to fill the same when melted.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

402 On reference to the accompaning drawing which forms a part of this specification—

Fig. 1 is a sectional elevation of my Improved Soldering Instrument, showing the manner in which the same is used.

Fig. 2, a plan view, and Fig. 3, an inverted plan view.

A is a metal case, which is split at the point *y*, and is adapted for the reception of a split copper ring B, the latter being secured by screws *a* to the case, so as to have a slight vertical movement in the same.

At the under side of the ring B is an annular rib or projection *b*, which has a sharp lower edge from the point *x* to the point *x*, and is rounded from the latter point to the point *x*.

In the lower edge of the case A are three friction rollers *c*, *c*, *c*, and at the top of the case is a socket *d*, for a purpose described hereafter.

To the case A are secured three guides C, C, C, each of the said guides, consisting of an L shaped plate *e*, and a straight slotted plate *e*—the plate *e* being secured to the case by a set screw

403 *f*, so as to be adjustable thereon—and by a set screw *f* to the plate *e*, so that the latter can be adjusted vertically.

When a cap, *z*, is to [be] soldered to the top of a preserve can X, the cap is placed in its position on the top; a ring, *s*, of soft solder is placed so as to cover the joint between the cap and the top, and a bar Y, with a disk *w* on the lower end, is passed through the slit in the case and ring, to the centre of the instrument, the ring B, in which has been heated in any suitable manner. The instrument is then placed in the position shown in Fig. 1, the annular projection *b*, being of such a size as to rest on the ring of solder, and the guides, C, C, are adjusted so that the plates *e* just touch the outer rim of the can.

Pressure is then applied to the bar Y, so as to hold the cap *z* in its place; the end of a bar, Z, is introduced into the socket *d*, and the instrument is turned in the direction of the arrow.

As the point *x* of the rib *b* is moved over the ring of solder *s*, the latter is melted and run between the edge of the cap and the top of the can, while the rounded portion of the rib, as it is carried

404 over the melted solder, spreads the latter so as to cover and fill completely the joint between the cap and top.

After the solder is all melted and spread, the instrument is raised by means of the handle or bar, Z, detatched from the rod Y, and placed where the ring B can be again heated while the pressure is

maintained on the bar Y, and on the cap, until the solder completely cools.

The size of the instrument, the position and shape of the rib *b*, and the character of the adjustable guides C, C, will vary somewhat with the character of the can, and position and shape of the top to be soldered.

If desirable the ring B may be used without the case A, the guides C, C, or their equivalents being secured to the ring; or the guides may be dispensed with, the bar Y serving as a guide, round which to turn the heated ring.

Without confining myself to the exact construction and arrangement of parts herein described, I claim as my invention and desire to secure by letters patent—

First. A metal ring B having a projection *b* on its lower edge, when the said projection is substantially of the form described, for the purpose specified.

405 Second. A case A, with rollers *c*, *c*, and adjustable guides C, C, or their equivalents, when the said case is adapted for the reception of the detachable ring B, and the whole is constructed and arranged substantially as and for the purpose specified.

Third. A ring, *s*, of solder for the purpose set forth.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

GEORGE F. STONE.

Witnesses: J. H. WHITEHURST.
L. R. WORSSON.

Ex.: M. McK. J. A. W.

(Here follows diagram, marked page 405.)

406 United States Circuit Court, District of Maryland, in Equity.

LOUIS McMURRAY, EDWARD M. LANG AND GEORGE BURNHAM, Jr., Trading as McMurray, Lang and Burnham,

vs.

DWIGHT D. MALLORY AND JESSE C. LUDDINGTON, Trading as D. D. Mallory & Co.

Complainants' Testimony in Rebuttal.

April 1st, 1880. Commission met; all counsel present.

E. M. Lang.

E. M. LANG, a witness produced on behalf of complainants, after being duly sworn, deposes and says as follows:

1st Interrogatory. State your name, age, residence, and occupation?

Ans. My name is E. M. Lang. I am forty-five years of age. I

G. F. Stone

Soldering Instrument.

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Mallory et al

Page 405.

Filed Sep. 17, 1866.

Fig: 1.

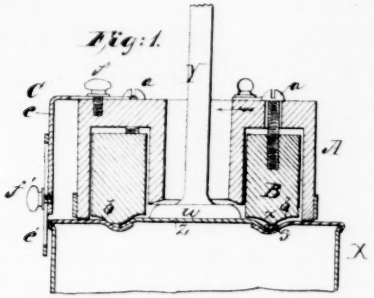


Fig: 3.

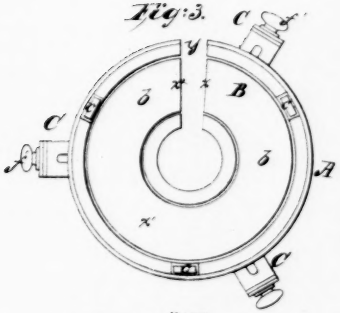
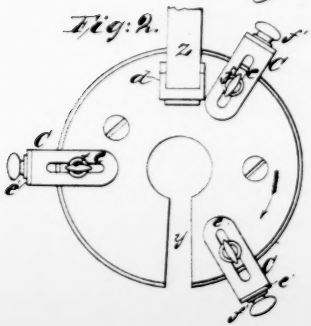


Fig: 2.



Witnesses:
Wm. Albert Stahl
John Parker

Inventor:
G. F. Stone
By his Attorney
A. H. Anson

reside in Portland, Maine. I am a solder and die manufacturer. I am one of the complainants in this suit.

407 2d Inter. Please state the circumstances under which you purchased the Bostwick patent, what you gave for it, and with whom you negotiated?

Ans. I negotiated through David A. Burr, of New York; he was counsel for Mr. Jabez A. Bostwick—several years ago, I called on Mr. Bostwick, and tried to purchase his patent; this was in 1873–1874. He asked me ten thousand dollars for his patent; I could not pay that amount, and I went to Washington, and made a thorough investigation, and there found the patent of Abel Barker, which antedated the Bostwick patent; I went to Wyoming, Penna., and there purchased the patent of Barker. I then returned home. Some three or four years after that I received a letter from David A. Burr, counsel for Mr. Bostwick, requesting me to pay a royalty for infringement on his, Bostwick iron; I wrote to New York, consulted Mr. Burr, and showed him my Barker patent, which I bought in Wyoming, and asked him, which was boss of the two patents? He told me that (objected to) the Barker patent, which I owned, was prior to the Bostwick, and that he could not recover damages. I then told him I would like to purchase the Bostwick patent, and if he could buy it for me for four or five hundred dollars, I would take it. I went back home; in a short time I received a letter, stating that he had consulted Mr. Bostwick in the matter, and under the circumstances, concluded to take five hundred dollars, which I paid him, Mr. Burr.

3d Inter. Were you at that time manufacturing a soldering iron; and, if yea, what pattern?

Ans. I was manufacturing a soldering iron; it was like that shown in Exhibit McMurray No. 2.

4th Inter. Do I understand you to say in your testimony, that you purchased the Barker iron to protect yourself against the demand of ten thousand dollars from Bostwick?

Ans. I did.

5th Inter. Please look at the letters now shown you, marked Complainants' Exhibit David A. Burr No. 1, No. 2 and No. 3, and herewith filed, dated May 6th, 1878, June 6th, 1878, and

408 July 30th, 1878, respectively, and state whether those are the letters in relation to which you have just testified?

Ans. They are.

Complainants' Exhibit David A. Burr No. 1, filed April 1st, 1880.
ISAAC BROOKS, JR., *Examiner.*

[David A. Burr, May 6, 1878.]

NEW YORK, *6th May*, 1878.

E. M. LANG.

DEAR SIR: Please send me a circular or description in other form of the capping iron which you manufacture for soldering cans,

reside in Portland, Maine. I am a solder and die manufacturer. I am one of the complainants in this suit.

407 2d Inter. Please state the circumstances under which you purchased the Bostwick patent, what you gave for it, and with whom you negotiated?

Ans. I negotiated through David A. Burr, of New York; he was counsel for Mr. Jabez A. Bostwick—several years ago, I called on Mr. Bostwick, and tried to purchase his patent; this was in 1873–1874. He asked me ten thousand dollars for his patent; I could not pay that amount, and I went to Washington, and made a thorough investigation, and there found the patent of Abel Barker, which antedated the Bostwick patent; I went to Wyoming, Penna., and there purchased the patent of Barker. I then returned home. Some three or four years after that I received a letter from David A. Burr, counsel for Mr. Bostwick, requesting me to pay a royalty for infringement on his, Bostwick iron; I wrote to New York, consulted Mr. Burr, and showed him my Barker patent, which I bought in Wyoming, and asked him, which was boss of the two patents? He told me that (objected to) the Barker patent, which I owned, was prior to the Bostwick, and that he could not recover damages. I then told him I would like to purchase the Bostwick patent, and if he could buy it for me for four or five hundred dollars, I would take it. I went back home; in a short time I received a letter, stating that he had consulted Mr. Bostwick in the matter, and under the circumstances, concluded to take five hundred dollars, which I paid him, Mr. Burr.

3d Inter. Were you at that time manufacturing a soldering iron; and, if yea, what pattern?

Ans. I was manufacturing a soldering iron; it was like that shown in Exhibit McMurray No. 2.

4th Inter. Do I understand you to say in your testimony, that you purchased the Barker iron to protect yourself against the demand of ten thousand dollars from Bostwick?

Ans. I did.

5th Inter. Please look at the letters now shown you, marked Complainants' Exhibit David A. Burr No. 1, No. 2 and No. 3, and herewith filed, dated May 6th, 1878, June 6th, 1878, and

408 July 30th, 1878, respectively, and state whether those are the letters in relation to which you have just testified?

Ans. They are.

Complainants' Exhibit David A. Burr No. 1, filed April 1st, 1880.

ISAAC BROOKS, JR., *Examiner.*

[David A. Burr, May 6, 1878.]

NEW YORK, *6th May*, 1878.

E. M. LANG.

DEAR SIR: Please send me a circular or description in other form of the capping iron which you manufacture for soldering cans,

also price list. (The iron having a central movable rod to hold the cap down whilst removing the iron, such as is used by Messrs. Burnham and Merritt, of your city.

Yours truly, DAVID A. BURR.

Complainants' Exhibit David A. Burr No. 2, filed April 1st, 1880.
ISAAC BROOKS, JR., *Examiner.*

[David A. Burr, June 6, 1878.]

NEW YORK, 6 *June*, 1878.

Messrs. E. M. LANG & Co., *Portland Maine.*

GENTS: Yours of 3d inst. received. I regret that I had not the pleasure of seeing your Mr. Lang when he called, for in a personal interview we could, without doubt, have promptly arranged the matter which I have in hand.

409 Mr. J. A. Bostwick, of this city, has retained me to secure for him compensation for the use of the Hollow Soldering Iron, for which he obtained a patent June 21st, 1870.

Your Capping Iron appears to be clearly an infringement of his patent, and he requests therefore the payment on your part of a reasonable royalty for its manufacture, including an account of those already made and sold.

Yours truly, DAVID A. BURR.

Complainants' Exhibit David A. Burr No. 3, filed April 1st, 1880.
ISAAC BROOKS, JR., *Examiner.*

[David A. Burr, July 30, 1878.]

NEW YORK, *July 30th*, 1878.

E. M. LANG, Esq.:

DEAR SIR: I called upon Mr Bostwick this morning, upon receipt of your esteemed favor of the 29th inst.

I found him unwilling to accept less than $500 for the patent, and in order to conclude the matter with him at that point, obtained his signature to an assignment naming this consideration; I trust that you may conclude it worth your while to take the patent at this price. If you desire to see me with regard to a re-issue or other matters, I am willing to run over to Portland with the papers so as to close the matter up there and have a talk with you. Otherwise you can send a check for the amount to your agent in this city, to whom I can deliver the assignment.

If you would prefer to see me in Portland, telegraph me upon receipt of this, otherwise I shall await your further advices.

Yours truly, DAVID A. BURR.

410 4th Inter. Do I understand you to say, that Mr. Bostwick and his counsel, Mr. Burr, did not recede in their demand against you, until you had shown them the patent which you owned, of Abel Baker?

Ans. Not till after I showed them their papers.

7th Inter. Mr. Mallory has testified in answer to the 10th interrogatory-in-chief, propounded to him, that "some three years ago Mr. Lang wished me to join him in buying up old capping and soldering patents that were laid aside, with the idea of getting a re-issue on them, that he might collect a royalty on them from other packers;" please state if this is true?

Ans. There is not any truth in it at all.

8th Inter. At that time you were the owner of the Barker iron, were you not?

Ans. I was.

9th Inter. Had you given notice to Mallory, prior to that time, that you were the owner of the Barker iron, and intended to prosecute infringements? (Objected to.)

Ans. I had.

10th Inter. Look at the letter-press copy of letter now shown you, already filed and marked "Mallory Notice No. 9," and state from where that copy was taken?

Ans. This was taken from my letter-book.

11th Inter. In whose handwriting is that?

Ans. Mr. Perez B. Burnham; he is my clerk and my attorney.

12th Inter. Was that letter written and sent in the regular course of business? (Objected to.)

Ans. It was at my request.

13th Inter. Did you, about that time or not, send out notices to the trade generally, that you were the owner of the Barker patent, and intended to prosecute infringers thereof? (Objected to.)

Ans. I did.

14th Inter. Messrs. Day, Platt & Numsen testified on be-
411 half of defendants, that you induced them to purchase certain character of irons, and get up others, so that you might bring into use your wire solder; state what your recollection is in relation to the testimony of these gentlemen?

Ans. It was a long while ago; I might have induced them to purchase irons to use my solder; I recollect going with Mr. Numsen at his request to Washington, and I think I introduced him to counsel there to obtain his patent; I also went with Messrs. Ewalt & Tillery to Washington at their request to see about getting their patents.

15th Inter. Were you at that time owner of any letters patent for soldering irons, or did you contemplate becoming owner of any soldering irons?

Ans. I was not and did not.

16th Inter. The defendants have filed in this cause an assignment from Samuel A. Ewalt to you of a part of his interest in certain letters patent. Please state how you came to purchase this interest and what were the circumstances under which the purchase was made?

Ans. I received a letter from Mr. Ewalt (letter objected to unless

produced), stating that his little boy was very sick and the doctor thought he would not live four hours, and that he hardly knew what to do for means to live. I immediately drew a check and sent him some money; the check was for fifty dollars. A few months after this I was here in Baltimore and met Mr. Ewalt. He told me he was sorry that he was not able to pay me back that money, but would do it as soon as he could. During our conversation he said that he had tried to sell his patents (objected to) to raise some money, and that he was unable to do so. I asked him what interest he had in the patents; he told me one-third; I told him I would take a one-sixth interest in the patents and pay him fifty dollars more, at which he was pleased, and consented to take at the time.

17th Inter. Mr. Mallory has testified in answer to the second redirect interrogatory propounded to him that he had not sought interviews with you or with any of the complainants in this
412 case for the purpose of making a settlement. Is this true?

Ans. I think not.

18th Inter. He also testifies to receiving a telegram from you last summer, requesting him to meet you in New York, but that he did not meet you there; please state if you sent such telegram; and, if yea, what were the circumstances?

Ans. I telephoned at Mr. Waidner's office in Baltimore, to Mr. Mallory's office, telling him that I should be in New York on Saturday, and would meet him at twelve o'clock at the Astor House. I presume Mr. Mallory's clerk telegraphed it to him at Fair Haven, Connecticut, and they telephoned from their office in Baltimore to Mr. Waidner's, and Mr. Waidner sent Exhibit Mallory No. 11 to me. I went right through to Portland, Maine, and did not stop in New York.

19th Inter. Had you received any communication prior to that from Mr. Mallory, to which this telegram was an answer? (Objected to.)

Ans. I think I did in the postal card Exhibit Mallory No. 10.

20th Inter. That postal card is dated Sept. 11th, 1879, and the note of Mr. Waidner to you, October 3d, 1879; what was the reason you did not answer Mr. Mallory's postal card until October 3d?

Ans. I was away from home at the time, my clerk sent the postal card to me; I could not tell just where I could meet him.

21st Inter. After you went home did you receive any communication from Mr. Mallory requesting an appointment with you?

Ans. I did; Exhibit Mallory No. 12 is the letter; he requested me to see him at his office or at his house, he would assure me that it would do me no harm.

22d Inter. Did you answer that letter or make any appointment to meet him?

413 Ans. I think I did; I sent him a postal stating that I should be in Baltimore at such a time, and should be pleased to meet him.

23d Inter. Did all this occur prior to his meeting you on Second St.? (Objected to.)

Ans. I did.

24th Inter. Have you ever in any manner offered any inducement to John A. Tillery, or promised any inducement to him for any purposes connected in any manner with this case, either by way of testifying in your behalf, or inducing others to testify in your behalf, or to take any part whatever adverse to Mr. Mallory in these proceedings?

Ans. I never have in any way, shape, or form.

25th Inter. Does Tillery owe you borrowed money; and, if so, how much?

Ans. He does; he owes me sixty dollars, for which I hold his note.

26th Inter. When did you loan him this money?

Ans. On March 16th, 1880.

27th Inter. Do you expect him to pay you this money when the note becomes due?

Ans. I certainly do; he always has paid me money that I loaned him.

28th Inter. Had you, prior to the date of Mr. Mallory's testimony in this cause, at which he filed the letters of Tillery to John L. Fritz, had any information whatever as to what Tillery knew about the circumstances of this case, or tools which were used prior to the date of the Barker and Bostwick patents, or what he would testify in relation thereto, if called upon? (Objected to.)

Ans. I had not.

Cross-examined by Mr. SMITH:

1st Cross-Interrogatory. Why did the fact of your owning the Barker patent cause Mr. Bostwick to fall in his price from ten thousand dollars to five hundred?

414 Answer. I suppose his counsel instructed him that the Barker patent was a prior invention, and that he could not sustain his.

2d Cross-Inter. It was his opinion then that both patents were for the same thing, was it? (Objected to.)

Ans. I can't say what his opinion was.

3d Cross-Inter. What was your idea in buying the Barker patent?

Ans. To protect myself in my business.

4th Cross-Inter. What protection did you suppose it would give you?

Ans. From being sued by other parties.

5th Cross-Inter. For what could other parties have sued you? (Objected to.)

Ans. I can't say.

6th Cross-Inter. Then what do you mean when you say that you bought it, to protect yourself in your business?

Ans. Supposing that it was a pioneer patent.

7th Cross-Inter. Were you using, manufacturing, or selling any soldering iron upon which you thought you could be sued?

Ans. I was.

8th Cross-Inter. Is McMurray No. 2 that iron?

Ans. It is.

9th Cross-Inter. Is that iron patented?

Ans. It is.

10th Cross-Inter. By whom was it patented?

Ans. By Jabez A. Bostwick and Barker. (Witness at once recalls his answer, and says that it was patented by McMurray.)

11th Cross-Inter. Were you or not manufacturing, using, or selling that iron as early as 1872?

Ans. I was not.

12th Cross-Inter. When did you first manufacture, use, or sell that iron?

Ans. Along in 1874.

13th Cross-Inter. By Mr. McMurray's permission?

415 Ans. No, sir.

14th Cross-Inter. When you say you bought the Barker Patent, was it to protect you against suits for the use of that iron?

Ans. Yes, sir.

15th Cross-Inter. Was the Bostwick Patent, in your opinion, worthless, in view of the Barker Patent antedating it?

Ans. No, sir; I should not have paid five hundred dollars for it if I had thought it worthless.

16th Cross-Inter. Did you not endeavor to make Bostwick or Burr, his counsel, think that the Barker Patent, being prior in date, rendered the Bostwick Patent of little or no value? (Objected to.)

Ans. I did not.

17th Cross-Inter. Then tell me what in the world the fact of your owning the Barker Patent had to do with the Bostwick Patent, so that Mr. Bostwick sold it for five hundred dollars, unless the Bostwick Patent was affected by the Barker antedating it?

Ans. They were so nearly of the same date, I bought it to stop litigation.

18th Cross-Inter. Where did you get the idea from which you made the iron like that marked McMurray No. 2?

Ans. From Louis McMurray; the first time I ever saw it was at his place.

19th Cross-Inter. Did you not endeavor, about 1874, to sell to several packers in Baltimore the iron like that?

Ans. I did.

20th Cross-Inter. To D. D. Mallory & Co., amongst others?

Ans. I think I did.

21st Cross-Inter. Look at Defendants' Exhibit "Portland Iron," herewith filed, and state whether that iron was manufactured by you; and, if so, when?

Ans. It was; I judge about 1874 or 1875.

22d Cross-Inter. Is that the identical iron which you endeavored to sell to the packers in Baltimore?

416 Ans. That is the style of iron.

23d Cross-Inter. Is that made after the McMurray Patent?

Ans. It is, with the exception of the material, Exhibit Portland Iron, is made of cast steel.

24th Cross-Inter. You will notice Exhibit Portland Iron is marked "patented in 1870;" was McMurray's iron patented in 1870?

Ans. I think not.

25th Cross-Inter. Why then did you so mark this iron.

Ans. Thinking that the Barker Patent covered this principle of the Portland Iron, and that I had the right to do so under the patent.

26th Cross-Inter. Exhibit Portland Iron then is constructed after the Barker Patent, and not after the McMurray Patent? (Objected to.)

Ans. I think it involves the principle of both of them, both McMurray and Barker.

27th Cross-Inter. Does not the wire or rod in the Barker Patent pass through the iron at the side of the handle?

Ans. I think it shows so in the drawing.

28th Cross-Inter. Did you see Mr. Mallory about three years ago, with reference to soldering irons?

Ans. I don't recollect whether I did or not; I have seen him off and on since 1871.

29th Cross-Inter. Do you say that you have had no conversations with Mr. Mallory, prior to 1879, with reference to soldering irons, especially as to buying up certain irons, and bringing suits to establish the validity of those irons?

Ans. I think I never did have any such talk with relation to these irons at all.

30th Cross-Inter. What irons did you have any talk about with him?

Ans. None that I know of whatever.

31st Cross-Inter. How often have you loaned money to Mr. Tillery?

Ans. Off and on ever since 1871.

417 32d Cross-Inter. Did you loan him any in 1879?

Ans. I think I did, and he paid it like a man.

33d Cross-Inter. How much did you loan him, and when and where was it paid?

Ans. I think it was the sum of twenty-five dollars; I don't recollect just the date, but I think it was in the fall. It was paid sometime after it was due; it was due about two months or six weeks ago; it was paid yesterday morning.

34th Cross-Inter. Did he give you the cash?

Ans. He did.

Re-direct by Mr. PRICE:

1st Re-direct Interrogatory. You say you did not have Mr. McMurray's permission to manufacture, use, or sell Exhibit McMurray No. 2, did you or not, in order to protect yourself from suit by McMurray, send him notice that he was infringing your Barker Iron in 1874?

Ans. I did send him that notice; I was as afraid of Mr. McMurray as much as I was of Mr. Bostwick.

E. M. LANG.

Subscribed and sworn to before me, this 1st day of April, 1880.

ISAAC BROOKS, JR., *Examiner.*

Then adjourned.

April 2d, 1880 Commission met: all counsel present.

John L. Fritz.

JOHN L. FRITZ, a witness produced on behalf of the complainants, after being duly sworn, deposes and says, as follows:

418 1st Interrogatory. State your name, age, residence, and occupation?

Answer. My name is John L. Fritz; I am thirty years of age; I reside 574 Hanover street; I am a can-maker.

2d Inter. Look at Exhibit Tillery Letter No. 1 and No. 2, and state whether you are the John L. Fritz who received those letters.

Ans. I am.

3d Inter. I find in one of those letters that Mr. Tillery requests you, if called on in the trial, to say that you never saw the Ewalt & Tillery iron until 1872. Please state when you first did see the Ewalt & Tillery iron.

Ans. I saw it in 1872: I may be a month or two out of the way.

4th Inter. I understand you then to say, that when Mr. Tillery requested you to say that you had never seen that iron before 1872, he was requesting you to say what was nothing more than strictly true?

Ans. Yes, sir; that is about right, I think.

5th Inter. When was the first time you ever saw the complainants in this case, upon any matter relating to your testimony herein?

Ans. Last Monday was the first day that I ever saw Mr. McMurray or Mr. Price. Mr. Lang used to sell solder to Platt & Co. when I worked there; I have never seen Mr. Burnham. The first time I ever saw them in relation to my testimony was last Monday.

6th Inter. Have you ever been offered any money, or any inducement whatever, by any of these parties, or any of their agents, for any assistance you might in any way render them touching the matters relating to this case?

Ans. I have not been.

7th Inter. Have you ever been offered any money by anybody to testify in this case; and, if so, by whom and when?

Ans. I have not.

419 Cross-examined by Messrs. BROWN & SMITH:

1st Cross-Interrogatory. Explain what Mr. Tillery means in Exhibit Tillery Letter No. 2, when he says, "if called on in the trial for you to say you never saw the Ewalt & Tillery iron until 1872?"

Ans. I don't know; I can't give any explanation.

2d Cross-Inter. Did you not come to my office with Mr. Tillery in November or December last to talk with me about this patent iron?

Ans. I did; but I don't recollect what date it was.

3d Cross-Inter. Did not Mr. Tillery say in your presence that he had invented his iron about 1864 or 1865?

Ans. He did.

4th Cross-Inter. Did he not also then say that he had capped up some tomatoes in your presence, about the same time?

Ans. He did.

5th Cross-Inter. Did he not also say that he had the old iron with which he did this work at his place in the country?

Ans. He said that he did have the old iron with which he did this work; I do not recollect that he said it was at his place in the country.

6th Cross-Inter. I explained to you at the time of this interview, that we would want you as a witness to prove the above facts, did I not?

Ans. I think you said something of that kind—I wish to make a statement so as to keep myself from being tangled up—I met Mr. Tillery in Baltimore, just before the conversation held at Mr. Smith's office above referred to. Mr. Tillery asked me if I would say that I saw that iron at work at such a time if Mr. Smith should ask me; I told him I did not care, but as to swear to it I could not; but if there was anything about the Ewalt & Tillery iron that he wanted me as a witness I might do something, because I said you know that I could not do it any other way.

420 7th Cross-Inter. When did you communicate to defendants' counsel the fact that it was not until 1872 that you first saw the Tillery iron?

Ans. I wrote a note to you, which I herewith file, marked Defendants' Exhibit Fritz Letter.

Defendants' Exhibit Fritz Letter, filed April 2, 1880.

ISAAC BROOKS, JR., *Examiner.*

BALTO., *Feb. 4th*, 1880.

Mess. SMITH & BROWN,

DEAR SIRS: In regard Mr. Tillery's case, I don't wish to appear, for my evidence will be of no benefit to any one; and furthermore,

I would not purge myself for any man or his money, which he expects me to do.

Very respectfully, JOHN L. FRITZ.

Re-direct by Mr. PRICE:

1st Re-direct Interrogatory. You say you told Mr. Tillery that as to making this statement to defendants' counsel, you did not care, but as to swearing to it, you could not; what did Mr. Tillery say to you then about swearing to it, if anything?

Ans. He did not want me to swear to it; he did not ask me to swear to it.

2d Re-direct Inter. Did he make any explanation why and for what purpose this statement should be made to defendants' counsel?

Ans. He said he wanted to scare somebody, or something of that kind; that is the way I took it.

3d Re-direct Inter. Who did he want to frighten?

Ans. That I can't say positively, if he did say; I cannot recollect.

421 4th Re-direct Inter. Did you know at the time that Tillery had no such old iron, and had not capped up in 1864 or 1865 tomatoes with any such iron?

Ans. Yes, I don't recollect of his having any such iron, or of my seeing it.

5th Re-direct Inter. Was that the reason why you addressed to defendants' counsel your note of February 4th, 1880, marked Fritz Letter?

Ans. Yes, I did not want to have anything to do with it, as I thought I might get myself into trouble about it, because I could not swear to anything except seeing the iron in 1872.

6th Re-direct Inter. You state in that letter that "you would not perjure yourself for any man or his money, which he expects me to do." What do you mean by that?

Ans. I could not get any sense out of this matter, and I could not see through it, and I thought I might get myself into trouble.

7th Re-direct Inter. What do you mean by the language "for any man or his money, which he expects me to do?"

Ans. I mean to say if I knew what I was doing, no man could offer me any money, or make any proposition to take a false oath.

8th Re-direct Inter. Was any money offered to you?

Ans. No, sir.

9th Re-direct Inter. About the time you wrote this letter to the defendants' counsel, what occurred that made you suspect that you would get into trouble, had you seen any one, and, if yea, whom?

Ans. I had not seen any one. I could not get any understanding out of the thing, what side I was to be summoned on in case I should be summoned, therefore I wrote the letter to defendants' counsel, stating that I would have nothing to do with it.

JOHN L. FRITZ.

422 Subscribed and sworn to before me, this 2d day of April, 1880.

ISAAC BROOKS, JR., *Examiner.*

John A. Tillery.

JOHN A. TILLERY, a witness produced on behalf of the complainants, after being duly sworn, deposes and says as follows:

1st Interrogatory. State your name, age, residence, and occupation?

Answer. My name is John A. Tillery; I am thirty-four years of age; I live in Northumberland county, Va.; I am a farmer at present.

2d Inter. Were you requested by Mr. D. D. Mallory to assist his counsel in getting up the defence in this case; and, if yea, what were your instructions?

Ans. I was. I was instructed to get up something that would back date those Bostwick and Barker patents.

3d Inter. Are you the John A. Tillery who procured joint patents with Samuel A. Ewalt for soldering irons?

Ans. I am.

4th Inter. Under your instructions to get up something that would date back of the Barker and Bostwick patents, what did you do?

Ans. I went round everywhere that I could to hunt, but I could not find anything.

5th Inter. Where did you go in your search for evidence?

Ans. To various packing houses.

6th Inter. Who did you consult?

Ans. Different cappers.

7th Inter. Were these cappers men who had had long experience in the business of capping, or young men new to the trade?

423 Ans. They were about as old as we have now.

8th Inter. What result did you obtain so far as soldering irons were concerned, which antedated 1870? (Objected to, as not in rebuttal.)

Ans. Nothing at all.

9th Inter. What report, if any, did you make to Mr. Mallory of these facts, and state what occurred?

Ans. I reported that I thought we were beat; he told me to keep that to myself?

10th Inter. What further instructions, if any, did he then give you?

Ans. He instructed me to go over and see Mr. McMurray, and to see if I could not scare him into a compromise, or a consolidation. I went and saw Mr. McMurray, and stated to Mr. McMurray that I thought we had him beat, and Mr. McMurray told me if I could go back as far as I stated to him, or any time beyond his legal pat-

ents, it was mine, and I ought to have it, but I had to do that in law, not in his factory. I came back and saw Mr. Mallory, and told him this, same as I now tell you. (When I told Mr. McMurray that I dated back of him to 1862, or 1864, it was a lie, and I knew it at the time.) Mr. Mallory then told me to keep away from Mr. McMurray; he then sat down and wrote a telegram, and gave it to me to copy to forward to Mr. Lang, which I did, and several days passed, and I received no answer. He then sat down and wrote a letter, and gave it to me to copy, to send to Mr. Lang, and after waiting awhile and getting no answer from either telegram or letter, he told me go round to the Rennert House and try and see Mr. Lang before any one else, particularly Mr. McMurray.

11th Inter. When he instructed you to see if you could not scare Mr. McMurray into a compromise or consolidation, did he instruct you what to say to him; and, if yea, what was it?

Ans. He instructed me to say just what I did say to Mr. McMurray.

424 12th Inter. Do I understand you to say that you knew at the time you told McMurray that you had a tool which revolved around an iron, which dated back as far as 1862 or 1864, that you had no such tool?

Ans. I told Mr. Mallory that I had none, and he knew that I told him.

13th Inter. After your failure with Mr. McMurray, do I understand you correctly to say you then commenced to see what could be done with Mr. Lang; is this true?

Ans. It is true.

14th Inter. Look at telegram marked Mallory No. 5, and state if that is the telegram which you referred to in your testimony?

Ans. Yes.

15th Inter. Did Mr. Mallory or not write this telegram at your request?

Ans. No, sir.

16th Inter. What was the object in writing that telegram?

Ans. To get Mr. Lang to implicate himself by answering it or to come on.

17th Inter. You have spoken of a compromise or a consolidation, were you instructed to make any terms of compromise or consolidation with Mr. Lang or Mr. McMurray; if yea, what? (Objected to.)

Ans. I was. Mr. Mallory said that he did not want to go into law, and if I could get it compromised or consolidated, he would give me and Mr. Ewalt all the Ewalt & Tillery machine.

18th Inter. What kind of a compromise were you expected to make with McMurray or Lang?

Ans. Any that I could; those were my instructions.

19th Inter. What was the meaning intended to be conveyed in the telegram to Lang, "I go to work for Mallory Monday, if I do not see you before then?"

Ans. To get him to answer the telegram, or make him think I was in Mallory's employ.

425 20th Inter. After this telegram was sent, did Mr. Mallory inquire of you if you had received any reply to it; and, if yea, how often?

Ans. Several times.

21st Inter. I understand you then that Mr. Mallory wrote a letter for you to copy, look at Complainants' Exhibit Mallory Letter No. 6, and state if that is the letter he wrote for you to copy?

Ans. It is, all but the closing, commencing "As I close, &c."

22d Inter. Was this letter written by Mr. Mallory at your request or at his own suggestion? (Objected to.)

Ans. At his own.

23d Inter. Was the meaning of the language in this letter explained to you when it was written; and, if yea, by whom?

Ans. It was by Mr. Mallory, a part of it was.

24th Inter. What part?

Ans. The part where it says, "Ewalt tells me you will make it all right with me for the time that I lose." Mr. Mallory told me if Mr. Lang were to answer that, he might convict himself.

25th Inter. Had Ewalt ever told you that Lang would make it all right with you for the time that you lost?

Ans. No, sir.

26th Inter. Was there any other part of the letter that he explained to you, if yea, which?

Ans. Yes; it commences with, "If I had the money to come with I would come on and see you, and I don't want to ask Mr. Mallory for anything or favors." Mr. Mallory said that that would make Mr. Lang think that I was for McMurray & Co., and Lang would know that if he (Mallory) had anything to do with it, that he (Mallory) had the money to send me.

27th Inter. Do I understand you that the letter and telegram were intended to entrap Lang, either to commit himself in

426 writing or to come on after your negotiations had failed with McMurray?

Ans. Yes.

28th Inter. What answers, if any, did you get to this letter or telegram?

Ans. None.

29th Inter. What were you instructed to do then?

Ans. To keep still and not let any one know that we were weakening.

30th Inter. My question relates to your instructions with regard to Mr. Lang, after your letter and telegram had failed to bring any response.

Ans. I was instructed to try and be the first man in Baltimore to see him if he did come.

31st Inter. What, if anything, were you instructed to say to him?

Ans. To tell him that we antedated him, and to try and compromise, if possible, with him.

32d Inter. Did you hear the testimony of John L. Fritz, given this morning in relation to a conversation with you, before the interview at the office of the defendants' counsel; and, if yea, state if that testimony is true, and your recollection of the circumstances as they occurred at the time. (Objected to.)

Ans. I did not pay strict attention to it.

33d Inter. I now read you a portion of the testimony, as follows: "Mr. Tillery asked me if I would say that I saw that iron at work at such a time, if Mr. Smith should ask me; I told him I did not care, but as to swear to it I could not;" do you remember such conversation, and, if yea, what occurred?

Ans. I do remember such a conversation except about swearing to it, as I did not want him to do anything like that.

34th Inter. What did you want him to do?

Ans. Just to assist me in trying to scare McMurray & Co.

427 35th Inter. Look at the letters now shown you, marked Tillery Letter No. 1 and No. 2, and state if you wrote those letters, and state what you meant by them?

Ans. Yes; in Tillery Letter No. 1, I say: "If called on in the trial for you to say you never saw Ewalt & Tillery iron until 1872," I meant I did not want him to do what I would not do myself; I never saw it until that year, and I was afraid they might scare him into it, and I did not want him to swear falsely. It also says: "I want Lang to win;" my meaning of that was, if I owned anything I should like to have it. It says: "I will tell you in a short while, I will have things so you and myself will make an easy living;" I meant by that, I have a new salve, and if I was able to get it patented I would take him in as a partner; a sample of that salve is in Mr. Mallory's office, it has been there since last fall, as he was an old and intimate friend of mine.

In Tillery Letter No. 2, it says: "If you can keep out of the way do so until you see me;" the meaning of that was, I would explain to him about the easy living, and to tell him to tell the truth under oath.

36th Inter. What was the reason that you ceased to look up anticipating tools for Mr. Mallory and went home?

Ans. Simply because I could not find any.

37th Inter. When did you see the first iron, mounted upon a rod, and constructed so as to slide up and down the rod, and rotate about it? (Objected to.)

Ans. The very latter part of 1871, or the early part of 1872.

38th Inter. How, and under what circumstances did you see that iron? (Objected to.)

Ans. Mr. Mallory instructed me to try and get up something to do capping, which I did; I went around from place to place, and I found nothing, only at Mr. McMurray's on Biddle street, there I saw an iron called in those days the Hollingsworth & McMurray's

iron, and reported back, that I could get around that, until this case, when I heard papers read.

428 39th Inter. Do you refer now to the time when you were getting up the Ewalt & Tillery iron, upon which you got several letters patent, and represented in this case by Exhibit Ewalt & Tillery Model?

Ans. Yes, sir; but I thought I had got around it.

40th Inter. Did you see the McMurray & Hollingsworth Iron before you had completed your Ewalt & Tillery Iron? (Objected to.)

Ans. I had.

41st Inter. Did you report the fact of having seen this iron to Mr. Mallory at that time? (Objected to.)

Ans. I did.

42d Inter. What do you mean by saying that you thought you had got around that iron until this case, when you heard the papers read? (Objected to.)

Ans. I was not an expert enough in patents to know the difference.

43d Inter. When was it that you left Baltimore and went home, after you had given up your search for old irons, to anticipate the Barker and Bostwick?

Ans. Sometime during December, 1879, I think.

44th Inter. How often, if at all, did Mr. Mallory send for you to come back?

Ans. He sent three times.

45th Inter. Who did he send?

Ans. Mr. Spencer I. Robinson once, a strange captain the second time, and William Row the third.

46th Inter. Did you tell Mr. Robinson that you wanted to borrow two hundred dollars from Mr. Mallory?

Ans. Not that I can recollect.

47th Inter. Did Mr. Row offer you two hundred dollars as a loan from Mr. Mallory; and, if not, state what occurred?

Ans. He offered me two hundred dollars to assign some patent papers of the Ewalt & Tillery machine to Mr. Mallory, which I would have done freely had I not thought that he was trying to buy me.

429 48th Inter. Had you received letters from Mr. Mallory in relation to your coming up, in addition to the parties sent after you?

Ans. Yes, sir.

49th Inter. In answer to the 20th Cross-Interrogatory, Mr. Mallory has sworn "Tillery had represented that he had valuable witnesses that he could produce to show that he had invented this iron many years previous to its being patented;" is that true?

Ans. I have no recollection of doing any such thing.

50th Inter. He also states in his testimony that he repeatedly told you that he did not want you as a witness; is that true?

Ans. It is not true.

51st Inter. Did Mallory at any time inform you that he had procured for you an interest in the firm of Grillet & Mann? (Objected to.)

Ans. He did.

52d Inter. Mr. Mallory has also said in his testimony that you had always said that you had an iron at your house in Virginia that would antedate the patents; is this true?

Ans. He knew that I was to say that I said it, but he knew that I was to say it.

53d Inter. Did he not know at the same time that you did not have such iron; and, if yea, how did he know it? (Objected to.)

Ans. He ought to have known, as I told him that I did not have such iron; he frequently told me to keep this to myself, and not to let it get out.

54th Inter. When was the process served at your house in Virginia, for the suit brought by Mallory against you in Virginia?

Ans. I got home on the 20th day of March, which was on Saturday; my wife told me it had been left there the Wednesday previous to the Saturday I came home. (Objected to.)

430 55th Inter. How long had you been in Baltimore before the Saturday when you arrived in Virginia?

Ans. If I had staid until the following Tuesday, I would have been here for two weeks.

56th Inter. Had these papers been left at your house, or with you before you came to Baltimore?

Ans. No, sir.

57th Inter. Then I understand you, you found these there after your return?

Ans. Yes.

58th Inter. During your visit at that time to Baltimore, did you see Mr. Mallory; and, if yea, did he make any mention to you of this suit?

Ans. I did see him; he made no mention of this suit.

59th Inter. Have Mr. McMurray, Lang, or Burnham, or anybody in their behalf, offered you any inducements, or made you any promises whatever, of any kind or description, for any services that you might render, or testimony that you might give, or for any purpose whatever in connection with or growing out of matters pertaining to this suit?

Ans. No, sir.

60th Inter. You have borrowed money from Lang have you not; if yea, state how much you have borrowed from him, and how much you owe him?

Ans. I have; I have been borrowing from him off and on since 1871, but I owe him at present sixty dollars, for which he has my note.

61st Inter. Do you expect to pay that note when due?

Ans. I do.

62d Inter. Mr. Lang has testified in relation to some $25, which

you paid him a few days ago, when was that money borrowed, and when was it due?

Ans. I could not tell you, as I did not notice the date of the note, but I knew it was paid.

63d Inter. About when was it borrowed?

Ans. In 1879 sometime.

431 64th Inter. When were you first spoken to, and when did you give information to any of the complainants, or their counsel, for the first time, concerning the matters and things to which you have just testified?

Ans. Either last Friday or last Monday.

Cross-examined by Messrs. BROWN and SMITH:

1st Cross-Interrogatory. During 1879, how often did you visit Baltimore?

Answer. I could not tell you.

2d Cross-Inter. Were you here prior to the visit at which time you were engaged to help to work up this case?

Ans. Yes.

3d Cross-Inter. Were you then sent for, or did you come of your own accord?

Ans. I came of my own accord.

4th Cross-Inter. What was the object of that visit?

Ans. I could not rightly tell you.

5th Cross-Inter. Had you any business that brought you; if so, what was it?

Ans. I think I came for employment, but I can't state.

6th Cross-Inter. How often during the time you were here did you visit our office?

Ans. I can't answer that, for I don't know.

7th Cross-Inter. Were you there often?

Ans. No, sir; no oftener than any other place.

8th Cross-Inter. Were you not there sometimes every day?

Ans. I was sometimes every day.

9th Cross-Inter. Was not every visit connected with this case?

Ans. No, sir.

10th Cross-Inter. What business had you there besides this case?

Ans. I came to see Mr. Smith as a friend.

432 11th Cross-Inter. Have we ever been on such friendly terms?

Ans. I thought I had been on friendly terms with him ever since I had been a witness in Mr. Numsen's case.

12th Cross-Inter. Did Mr. Ewalt often come with you? (Objected to.)

Ans. No, sir.

13th Cross-Inter. Did he never come with you?

Ans. He did so once—that is all I know—during this visit inquired of?

14th Cross-Inter. Was not this case the business which always engaged us?

Ans. No, sir; I have been to your office, and have sat there while you were both in the back-room, and I would go out without ever seeing you.

15th Cross-Inter. When you did see us, was not this the business which engaged us?

Ans. We might have had some talk about this case, but I don't think it was all of our business.

16th Cross-Inter. What other business had we together?

Ans. We have talked about other things, but our business relations were in reference to this suit.

17th Cross-Inter. Did Mr. Mallory request you to assist us in getting up the defence?

Ans. He requested me to try and get something if I could.

18th Cross-Inter. Who gave us the names of Jno. L. Fritz, John O'Brien, Randolph R. Delany, Henry French, and Mr. Lurman, as witnesses to prove prior use?

Ans. I gave them.

19th Cross-Inter. What did you say they would prove?

Ans. Priority.

20th Cross-Inter. What do you mean by priority?

Ans. I mean anything that dates beyond another thing.

21st Cross-Inter. They were to prove something that dated prior to the Barker and Bostwick patents, were they not?

433 Ans. Well, Fritz was the only one I spoke to. I gave them as being as old cappers as I was. I gave them because I could get nothing less. I can't answer the question.

22d Cross-Inter. Who is Mr. Lurman?

Ans. He is a German; I became acquainted with him at Mrs. McElroy's, in Philadelphia.

23d Cross-Inter. Did he ever live in Baltimore?

Ans. He told me so.

24th Cross-Inter. Did you ever know him in Baltimore?

Ans. I have seen him here.

25th Cross-inter. In what business was he engaged in here?

Ans. He told me he was a part machinist and blacksmith.

26th Cross-Inter. Did he carry on the business here?

Ans. Not that I know of.

27th Cross-Inter. What was he to prove in this case?

Ans. That he made this old machine that I had in Virginia.

28th Cross-Inter. Where was he to say he made it?

Ans. I can't answer that.

29th Cross-Inter. What was John O'Brien to prove?

Ans. I just cited them as witnesses.

30th Cross-Inter. You did not say, then, that he would prove anything particular?

Ans. Not to my recollection.

31st Cross-Inter. Do you remember that you gave his name, and

said he would prove that he had seen you, about 1864, cap up some tomatoes with the old iron which you have mentioned?

Ans. I do not remember whether I did or not.

32d Cross-Inter. Do you say that you did not?

Ans. I can't answer it.

Then adjourned.

April 3d. Commission met; all counsel present. The cross-examination of the witness was then resumed.

434 33d Cross-Inter. Who is Randolph R. Dulaney?

Ans. My brother-in-law.

34th Cross-Inter. Did you give his name as a witness?

Ans. I did.

35th Cross-Inter. How old is he?

Ans. He is twenty odd; twenty-four or six.

36th Cross-Inter. What was he to prove?

Ans. Nothing; I only cited him as a witness through the instruction of Mr. Mallory; he told me to cite some one.

37th Cross-Inter. You have said the names you gave were among the oldest cappers that you knew of, is Dulaney one of them?

Ans. No, sir.

38th Cross-Inter. Why, then, did you give his name?

Ans. Because he has been working round packing houses ever since I knew him.

39th Cross-Inter. Did you not say that he would swear that he had seen the old iron of yours in 1864, or thereabouts?

Ans. No, sir; not to swear to it.

40th Cross-Inter. What then?

Ans. That he would swear the truth if called on.

41st Cross-Inter. What truth would he swear to?

Ans. Any I suppose he knew.

42d Cross-Inter. What did he know about this old iron of yours?

Ans. Nothing, as I did not know anything about it myself.

43d Cross-Inter. Do you swear that you did not tell me that Dulaney had seen this old iron of yours about 1864?

Ans. I don't swear that I did not tell it, but I told it as a sham to assist Mr. Mallory, in the instructions he gave me to beat Mr. McMurray.

44th Cross-Inter. Who is Henry French?

Ans. He is a can-maker and a capper.

45th Cross-Inter. Where is he, and how long have you known him, and when did you last see him?

435 Ans. I heard he was dead. I have known him since 1862. I saw him last about ten years ago; it might have been less.

46th Cross-Inter. When did you hear that he was dead?

Ans. When I was in Baltimore the last time?

47th Cross-Inter. Who told you?

Ans. One of the can-makers, I could not tell which one.

48th Cross-Inter. Do you now say that you did not know he was dead when you gave his name?

Ans. I do.

49th Cross-Inter. Was Mr. Mallory acquainted with any of these men?

Ans. I could not tell you.

50th Cross-Inter. Did he give you these names to prove prior use?

Ans. No, sir; Mr. Mallory instructed me to get some one so we could file an answer in the case that is now pending.

51st Cross-Inter. Did Mr. Mallory ever tell you to get the names of any persons who could not prove prior use?

Ans. He did.

52d Cross-Inter. Did you tell him that you had given these names, and that they could not prove prior use?

Ans. I did, sir.

53d Cross-Inter. Did you say frequently that you had this machine, which you had invented in 1864, down in your home in the county?

Ans. I did, through the instructions of Mr. Mallory telling me to say so.

54th Cross-Inter. Did you say to us that you had sent down for that iron, and were daily expecting it?

Ans. Not to my recollection.

55th Cross-Inter. Do you say that you never did tell us that you had sent for it?

Ans. I did tell you that I had sent for it, through the instructions of Mr. Mallory telling me to tell any one that asked me.

436 56th Cross-Inter. You knew, did you not, that your name as well as those of Fritz, O'Brien, French, and Lurman, were in the answer to prove prior use?

Ans. I did not know it.

57th Cross-Inter. You knew that you had given us these names, and their addresses, which were to be put into the answer, did you not?

Ans. I did, through the instruction of Mr. Mallory; he told me to give some one, and I thought they were as reliable as any I could give.

58th Cross-Inter. Did you know that these persons would be called upon as witnesses in this case, to prove under oath that they had seen this old iron of yours?

Ans. I did not, as Mr. Mallory told me he wanted to compromise it.

59th Cross-Inter. You knew that if the case was not compromised they would be called on for this purpose, did you not?

Ans. I did not.

60th Cross-Inter. Please state, then, why you wrote your first letter to Fritz, and said, "if called on you are to swear that you never saw the Ewalt & Tillery iron until 1872?"

Ans. Because Mr. Mallory being a smart man and a moneyed

man, might try to scare Mr. McMurray & Co. by going into suit, and John L. Fritz and others that I gave might be brought before the court, and, if so, I did not want them to swear anything but the truth.

61st Cross-Inter. You have said you did not know they were to swear, then why did you so write him?

Ans. As when I went home I got a letter from my mother-in-law stating that the case of patent irons was going on, and Barney Kegan was at her house after her son, Randolph Dulaney, and I feared they would summons them, and I did not want them to do anything but what was right.

62d Cross-Inter. I again ask you if you did not know they were to swear; why did you write to Fritz?

437 Ans. My letter was partly friendship, and, not being a good composer of a letter, I thought Mr. Mallory was trying to get me into a trap.

63d Cross-Inter. If you did not know they were to swear, I again ask you why did you write Fritz what he was to swear to? (Objected to, on the ground that the witness had twice answered that question.)

Ans. I suppose through ignorance.

64th Cross-Inter. Do you think an ignorant man would have written a witness what he was to swear to if he was intelligent enough to know that he was to swear?

Ans. I did not know whether he was to swear or not, as Mr. Mallory told me to do anything to scare Mr. McMurray & Co. into a compromise?

65th Cross-Inter. When did you see Mr. McMurray about the compromise?

Ans. In November—I think the early part.

66th Cross-Inter. It was before the letter marked Mallory Letter No. 6 was written to Lang, was it not?

Ans. Yes.

67th Cross-Inter. Did you tell Mr. McMurray that Fritz, O'Brien, French, and Lurman, were the names of witnesses that you had to prove the knowledge of an iron that antedated 1870?

Ans. I did not.

68th Cross-Inter. Did you tell Mr. Lang?

Ans. I did not.

69th Cross-Inter. No one knew of these names except yourself and Mr. Mallory's counsel, did they, until the answer was filed?

Ans. I think Mr. Mallory did, and I think I spoke to several persons about the names of the witnesses.

70th Cross-Inter. To whom did you speak?

Ans. I think to Mr. Ewalt for one; I can't think of any more.

71st Cross-Inter. Did you speak to any one except persons connected with this case about the old iron?

438 Ans. I don't think I did.

71½ Cross-Inter. Did you tell Mr. James E. Stansbury, that you had this old iron down in the county?

Ans. I don't recollect talking to Mr. Stansbury about anything connected with this suit; I know Mr. Stansbury slightly.

72d Cross-Inter. Tell us whether or not the complainants in this case knew anything about these witnesses, when you were trying to obtain a compromise?

Ans. No, sir.

73d Cross-Inter. Then tell us what effect these names would have towards bringing about a compromise, if they knew anything about them?

Ans. I could not answer.

74th Cross-Inter. Have you not said that you were told to give the names of some persons as witnesses, so as to scare Mr. McMurray and Lang?

Ans. I have, but I meant if we did not give some one we would not have a case; Mr. Mallory's counsel told me, according to legal patents, McMurray & Co. had us beat.

75th Cross-Inter. Then you say, that you did not mean what you said, when you said you gave those name to scare these gentlemen? (Objected to.)

Ans. I can't answer that.

76th Cross-Inter. You were with Mr. Ewalt very frequently while in Baltimore, were you not: I mean in October and November last?

Ans. I was not: I was not more frequently than I ever was.

77th Cross-Inter. Mr. Ewalt in his answer to the 30th cross-interrogatory says, that he had frequent conversations with you, with reference to this case, that is prior to the 23d of December last, is that true?

Ans. I don't know of many.

78th Cross-Inter. You and he did talk about the case, did you not?

439 Ans. No more than how things were working; he would say this to me, or I would say this to him.

79th Cross-Inter. Was this a frequent occurrence?

Ans. No, sir.

80th Cross-Inter. Then he swore to what was not true, did he?

Ans. I can't say.

81st Cross-Inter. Did you know that he was at that time employed by Mr. McMurray?

Ans. No, sir.

82d Cross-Inter. When did you first learn that?

Ans. Since his testimony has been taken.

83d Cross-Inter. You kept him posted as to what was going on at that time in connection with the case, did you not?

Ans. No, sir.

84th Cross-Inter. What answers then did you make when he asked you how things were working?

Ans. First-rate; I was instructed by Mr. Mallory to answer him in that way.

85th Cross-Inter. Why did Mr. Mallory so instruct you?

Ans. I could not tell you.

86th Cross-Inter. Did you know that Mr. Ewalt had sold part of his interests in the patents to Mr. Lang; and, if so, when did you first learn it, and from whom?

Ans. I think I first learned it from defendants' counsel; when, I could not tell you.

87th Cross-Inter. Did you know of Mr. Ewalt being in the interest of the complainants before you left for the country in December?

Ans. No, sir.

88th Cross-Inter. You had not then been careful to keep any matters connected with the case concealed from him, had you?

Ans. Through the instructions of Mr. Mallory, I had.

440 89th Cross-Inter. Was not Mr. Ewalt, as owner of an interest in the patent, interested in the result of this suit? (Objected to.)

Ans. I can't say.

90th Cross-Inter. When did you first see Mr. Lang, during that visit last fall?

Ans. It was about the 14th of December.

91st Cross-Inter. Did you endeavor to effect a compromise with him?

Ans. I did.

92d Cross-Inter. On what terms?

Ans. He would not listen to me—to nothing; as soon as I commenced he said we would have to settle it in law.

93d Cross-Inter. Was it about that time you borrowed twenty-five dollars from him?

Ans. It was.

94th Cross-Inter. You received some letters from Mr. Lang, did you not, after you returned home?

Ans. No, sir.

95th Cross-Inter. Have you not told some persons that you did?

Ans. Not to my recollection.

96th Cross-Inter. Do you say that you have not told any one so?

Ans. I can't answer that.

97th Cross-Inter. Please tell me why you wanted Mr. Lang to win, as you wrote to Mr. Fritz?

Ans. If my iron was on top I would want it to win.

98th Cross-Inter. Was his iron on top?

Ans. According to what you told me, it must have been.

99th Cross-Inter. When did you find that out?

Ans. I can't tell.

100th Cross-Inter. What did I tell you?

Ans. If you could find nothing that rotated around a rod to

antedate the patents you were reading to me Lang would surely win.

441 101st Cross-Inter. You knew from the first that the Barker and Bostwick patents were granted in 1870, and the Ewalt & Tillery patents in 1872, did you not?

Ans. I knew nothing about the Barker & Bostwick patents until after this suit.

102d Cross-Inter. When I said from the first, I meant from the first time you came to see us.

Ans. No, sir.

103d Cross-Inter. When did you first learn that the Barker & Bostwick irons were dated 1870?

Ans. I could not tell, exactly, but along in December.

104th Cross-Inter. Don't you know that we read the Barker and Bostwick patents to you, and told you that they were dated in 1870, when we first began to work up the case together?

Ans. No, sir.

105th Cross-Inter. Do you say that we never told you until December?

Ans. That is the nearest that I can come to it.

106th Cross-Inter. Did you know the Barker and Bostwick patents bore a prior date to yours before December last?

Ans. No, sir.

107th Cross-Inter. As soon as you learned the Barker and Bostwick patents bore a prior date to yours, you then wanted Mr. Lang to win, did you?

Ans. After I could not find anything to beat him, if it was his, I wanted him to have it.

108th Cross-Inter. Tell me what you were working for, visiting the different packing houses and seeing the oldest cappers, if you did not know that the Barker and Bostwick patents were prior in date to yours?

Ans. Mr. Mallory instructed me to go round, that he had understood that Mr. Lang had bought up something that would date beyond ours.

109th Cross-Inter. He told you that when you began, did he?

442 Ans. He did.

110th Cross-Inter. Why, then, as you knew Mr. Lang owned a patent of prior date, did you not at once "want Lang to win?"

Ans. Mr. Mallory told me if I could scare McMurray & Co. into a consolidation or compromise, he would give me and Ewalt the entire interest in the Ewalt & Tillery machine.

111th Cross-Inter. I repeat the question. (Objected to.)

Ans. Because I wanted to get into the firm of McMurray & Co., if I could.

112th Cross-Inter. Mr. Lang offered you an interest in that company, did he not, if they could win?

Ans. No, sir.

113th Cross-Inter. You then say that it was only from your sense of what was right that you wrote to Fritz that you "wanted Lang to win?"

Ans. It was.

114th Cross-Inter. Did you ever speak to Fritz about your salve?

Ans. I could not tell.

115th Cross-Inter. What is your recollection?

Ans. I could not tell that.

116th Cross-Inter. Please state when in December you left Baltimore, and why you left?

Ans. Along about the middle of it. I left for one thing—my family was sick and I had work to do at home.

117th Cross-Inter. For what other reasons?

Ans. Nothing that I know of.

118th Cross-Inter. How long had Mr. Lang been in Baltimore before you left?

Ans. I could not tell you.

119th Cross-Inter. Had he been here a month?

Ans. I can't tell you.

120th Cross-Inter. How often had you seen him?

Ans. Several times, but I could not tell you exactly how many.

443 121st Cross-Inter. How often did you endeavor to effect a compromise with him?

Ans. Only the once, and that was the first time I saw him.

122d Cross-Inter. Did you and he have any conversation as to what Fritz and the other witnesses would prove?

Ans. No, sir.

123d Cross-Inter. Did he ask you what they would prove?

Ans. No, sir; he asked me nothing about them.

124th Cross-Inter. Did you tell him you had invented your iron before 1870?

Ans. Yes, sir; just as Mr. Mallory instructed me to do.

125th Cross-Inter. Did you tell him that you had witnesses to prove that?

Ans. No, sir; he did not give me any chance, he said he did not want to hear any talk about patent irons.

126th Cross-Inter. What did you talk about at your other interviews?

Ans. He would tell me jokes and I would laugh at them, and I would tell him jokes and he would laugh at them.

127th Cross-Inter. Was it while you were joking in this way that you borrowed the twenty-five dollars from him?

Ans. Yes, sir.

128th Cross-Inter. Did you not go home, because you did not want to testify against Mr. Lang?

Ans. No, sir.

129th Cross-Inter. Why then did you write to Fritz, "I left as I do not want to be a witness against Lang?"

Ans. Simply because I had nothing to say.

130th Cross-Inter. If you had nothing to say, what could you say against Mr. Lang?

Ans. Nothing.

131st Cross-Inter. Then you need not have left on that account?

Ans. No, sir; and I did not.

444 132d Cross-Inter. Did you write a falsehood to Fritz?

Ans. No, sir; and when I wrote that I had no ill feeling to any one, neither to Mr. Mallory nor to Mr. Lang.

133d Cross-Inter. Please explain this language in "Tillery Letter No. 1," "and when you see me, you will say it is a good day's work for you?"

Ans. Simply because I did not want him to testify to anything but what was the truth; I feared they might scare him, and when I came up the last time, I intended to tell him not to swear to anything but what was the truth.

134th Cross-Inter. Has any one connected with this case, to your knowledge, asked Fritz to swear to anything that is false?

Ans. No, sir.

135th Cross-Inter. You have not yet explained what is meant by a good day's work in that letter; what did you mean?

Ans. That he did not swear falsely; that is a good day's work.

136th Cross-Inter. Had Fritz written you about this case before you wrote the letter, marked Tillery Letter No. 2?

Ans. I can't tell.

137th Cross-Inter. You did not want him to swear that he had seen the Ewalt & Tillery iron before 1872, for fear that if he did so testify, Lang could not win; is not that true?

Ans. It is not true.

138th Cross-Inter. Why then did you write Fritz thus: "If called on in the trial for you to say you never saw the Ewalt & Tillery iron until 1872, AS I WANT LANG TO WIN?"

Ans. Simply because I knew it was the truth.

139th Cross-Inter. Did Mr. Mallory ask you to swear that you had invented your machine in 1864?

Ans. No, sir; but he told me to tell people that I had.

140th Cross-Inter. Did he ask you to get witnesses who would swear that they had seen your machine in 1864?

445 Ans. I don't know whether he meant to swear or not; he asked me to get witnesses.

141st Cross-Inter. Will you please explain what would be the effect toward securing a compromise of your getting witnesses to prove this fact when you testify that you never told Mr. McMurray or Mr. Lang that you had these witnesses?

Ans. I can't tell you; I only did as Mr. McMurray told me.

142d Cross-Inter. You have testified that the object of sending the telegram, marked "Mallory No. 5," and the letter, marked "Mallory Letter No. 6," was to get Mr. Lang to implicate himself

by answering or coming on. Tell us how he could implicate himself?

Ans. I don't know; that was what Mr. Mallory said.

143d Cross-Inter. You say, in answer to the 24th interrogatory, explaining a part of Mallory Letter No. 6, you say "Mr. Mallory told me if Mr. Lang were to answer that he might convict himself." Convict himself of what?

Ans. I don't know what he meant.

144th Cross-Inter. Did Mr. Mallory have any other object in dictating this letter and telegram than to effect a compromise?

Ans. I could not tell you.

145th Cross-Inter. Did Mr. Robinson ask you to do anything except assign the two-thirds interest of the Ewalt & Tillery iron to Mr. Mallory?

Ans. Nothing that I can recollect.

146th Cross-Inter. You asked for a loan of two hundred dollars from Mr. Mallory, did you not?

Ans. Not through Robinson; I told Mr. Robinson if my hands were untied I could make an easy living down there, and he asked me what I meant, and I told him I owed that much.

147th Cross-Inter. Through whom did you ask for the loan?

Ans. I asked no one but Mr. Mallory.

148th Cross-Inter. When did you ask him?

446 Ans. Once two years ago, and occasionally ever since.

149th Cross-Inter. Since Mr. Robinson was down there, where did you ask Mr. Mallory?

Ans. I can't recollect.

150th Cross-Inter. Did the strange captain or Mr. Row ask you to do anything except assign the interest to Mr. Mallory?

Ans. The captain asked me to come to Baltimore, as Mr. Mallory wanted to see me; my children were lying low, and I could not come; Mr. Row came down, and wanted me to assign the papers; he had different papers from what Robinson had; he told me he wanted me to assign two-thirds of the patent iron to Mallory, and that he had two hundred dollars for me; I not understanding what it meant, I thought he was trying to buy me, and told him that, as hard up as I was, he could not do that thing.

151st Cross-Inter. Will you tell us what he wanted to buy you to do?

A. I cannot; being a little afraid of the law, I would not take the two hundred dollars.

152d Cross-Inter. Have you not offered since that time to assign that interest if Mr. Mallory would give you the two hundred dollars?

Ans. Not to my recollection.

153d Cross-Inter. Do you swear that you have not?

Ans. Not to my recollection, I have not.

154th Cross-Inter. Have you seen Mr. Mallory since that, and had any conversation with him about assigning this interest?

Ans. I have seen Mr. Mallory, in answer to the captain, but do not recollect of talking about any interest with him.

155th Cross-Inter. If I were to tell you that Mr. Mallory says that you have, since Mr. Row was down there, offered to assign that interest to him on payment of $200 or thereabouts, would you say that he told what was untrue?

Ans. I cannot say.

447 156th Cross-Inter. You have asked Mr. Mallory for employment within the past six months have you not?

Ans. I might have.

157th Cross-Inter. Mr. Ewalt has testified that he visited last fall most of the packing houses in Baltimore, in order to ascertain the kind and number of soldering irons they were using; did you accompany him on some of those visits?

Ans. Not directly. I did not; I have been in packing houses with him; I did not know what he was doing.

158th Cross-Inter. Did he not tell you that he was employed by Mr. McMurray for that purpose?

Ans. I never heard a word of it until after his testimony here.

159th Cross-Inter. In his conversations with you did you infer that he was interested in Mr. McMurray's gaining this case?

Ans. I did not; I had no right to.

160th Cross-Inter. Did you not state to us that the reason why you did not take out letters patent for your iron until 1872, was that you never got enough money ahead of you to pay the cost of obtaining it?

Ans. Through the instructions of Mr. Mallory, I did.

161st Cross-Inter. Who furnished you the money with which you and Mr. Ewalt obtained your patent?

Ans. D. D. Mallory.

162d Cross-Inter. You were in his employ for many years, were you not?

Ans. I was.

163d Cross-Inter. Was not Mr. Lang in Washington with you when you obtained your patents?

Ans. He was.

Re-direct examination:

1st Re-direct Interrogatory. You say you asked Mr. Mallory a couple of years ago, for two hundred dollars, and occasionally since. What was this two hundred dollars for?

448 Ans. I wanted to purchase a team, which I had to give a bond for to get, and since I gave this bond, I have asked him for the two hundred dollars.

2d Re-direct Inter. Was this bond a lien upon your farm?

Ans. It is a lien upon my wife's farm.

3d Re-direct Inter. When you saw Lang as you say, and endeavored to approach him about a compromise, were you looking for Lang, or was Lang looking for you?

Ans. I was looking for Lang.

Re-cross by Messrs. BROWN and SMITH:

1st Re-Cross-Interrogatory. Has that bond been paid?
Answer. No, sir.

JNO. A. TILLERY.

Subscribed and sworn to before me, this 3d day of April, 1880.
ISAAC BROOKS, JR., *Examiner.*

Then adjourned.

April 13th, 1880. Commission met; all counsel present.

George Burnham, Jr.

GEORGE BURNHAM, Jr., a witness produced on behalf of the complainants, after being duly sworn, deposes and says as follows:

1st Interrogatory. State your name, age, residence, and occupation?

Answer. My name is George Burnham, Jr.; I am forty-nine years of age; I reside at Cumberland, Maine; I am a packer of hermetically sealed goods, and am one of the complainants in this suit.

449 2d Inter. How long have you been in the packing business, and what is your knowledge in relation thereto in regard to all the details of preparing, packing, sealing, and processing these goods?

Ans. I have been at work in the packing business since 1845 up to the present time; I think I have a thorough knowledge of the business.

3d Inter. Will you now give us in detail the different stages of packing these goods from the time they are prepared for entering the cans until they are ready for sale?

Ans. The cans are filled, then the cap is placed upon the can, it is sealed, then put into a bath of hot water, or any other bath, when they are subjected to heat. If the bath be water, they are in the bath one hour, then taken out and vented, then returned to the bath, and given from three to four hours, or such time as is necessary to preserve the goods: different articles require different periods for remaining in the bath.

4th Inter. What part of these different stages which you have detailed is that which is known by packers as processing?

Ans. Venting and bathing.

5th Inter. I understand you in your testimony to say that the goods after being sealed are first placed in a hot bath for a short time and then vented before they are placed in the second or longer bath; explain how this venting is done?

Ans. It is done by melting the drop of solder upon the vent hole.

6th Inter. Where is this vent hole in the can? (Objected to.)

Ans. In what we call the stud or cap, which covers the opening of the can.

7th Inter. When is this hole in the cap of the can usually closed?

Ans. Immediately after it is sealed.

8th Inter. Of what use is that hole in the cap, so far as facilitating the sealing of the can is concerned?

450 Ans. I don't know that it is any.

9th Inter. Are you acquainted with the French hermetically sealed goods as they appear in our market for sale? (Objected to.)

Ans. I am.

10th Inter. Is there any hole in these cans over the cap? (Objected to.)

Ans. I never have been able to find any.

11th Inter. Is it practical to seal cans so that they will stand processing, without having a hole in the cap, or in the head of the can, or anywhere else about the can? (Objected to.)

Ans. It is.

12th Inter. Have you ever done this yourself, or have you seen it done; and, if yea, when and where? (Objected to.)

Ans. I have seen it done at Mr. McMurray's last week; I have sealed them myself.

13th Inter. Have you any cans so sealed, and the tools with which they were so sealed; and, if yea, please produce them? (Objected to.)

Ans. I have none sealed without a hole in the cap, but I have some here done by myself; I herewith produce them, marked Burnham Cans; I also produce the soldering tools by which these cans were capped, marked Burnham-Bostwick and Burnham-Barker.

(The filing of the cans and tools objected to.)

14th Inter. How many of these cans did you see capped, and how many did you cap yourself? (Objected to.)

Ans. I saw more than one hundred capped; I capped thirty or forty myself.

15th Inter. Did you fail in your capping in any instance, or did you see anybody else fail? (Objected to.)

Ans. I did not.

16th Inter. Were these cans processed or not?

Ans. They were.

451 17th Inter. These cans which you have filed, were they selected especially out of the lot which you capped, or were they taken as mere samples of the general work which you did? (Objected to.)

Ans. They were taken as mere samples.

18th Inter. Are you able to tell which of these cans were capped by Exhibit Burnham-Barker, and capped by Burnham-Bostwick?

Ans. I am; those marked with a B on the bottom were sealed with the Burnham-Baker iron, and those marked B X were sealed with the Burnham-Bostwick iron.

19th Inter. Are you sufficiently acquainted with this business to know a good job of capping when you see it?

Ans. I am.

20th Inter. State if those cans are well capped, and how they compare with other first-class work? (Objected to.)

Ans. They are well capped, and compare favorably with any work.

21st Inter. What trouble did you have in using the Exhibit Burnham-Barker from burning your hand whilst using it?

Ans. None whatever.

22d Inter. What trouble did you have in rotating it?

Ans. None.

23d Inter. What trouble did you experience from the upper part of the recess from burning the cap on the can?

Ans. None whatever.

24th Inter. What trouble did you find about the rod moving over the top of the cap?

Ans. None; I did not rotate it far enough to disturb the rod.

25th Inter. Did you solder these cans with your hand upon the movable rod or not?

Ans. I did; I held the cap down with it whilst soldering.

26th Inter. Did you burn your fingers in doing so? (Objected to.)

Ans. I did not.

452 27th Inter. What kind of solder did you use?

Ans. A segment of wire solder.

28th Inter. What portion of a circle was this segment?

Ans. It was nearly a whole circle.

29th Inter. In the cans which you soldered with the Burnham-Bostwick, what trouble did you experience in getting an even pressure upon the solder?

Ans. None whatever.

30th Inter. Did you hold your hand on the top of the rod whilst using that tool, or did you allow the rod to press with its own weight on the top of the cap?

Ans. I kept my hand on it whilst soldering.

31st Inter. What inconvenience did you have in rotating the iron about the rod?

Ans. None whatever.

32d Inter. What inconvenience did you experience from the heating of the rod by the iron?

Ans. None whatever.

33d Inter. How long have you known a circular soldering iron, rotating about a central rod, to have been used? (Objected to.)

Ans. Since 1871.

34th Inter. Whose was the first you ever saw? (Objected to.)

Ans. McMurray's, on Biddle street.

35th Inter. Look at Defendants' Exhibit McMurray No. 2 and

state how long you have known such iron to have been in use, and what to your knowledge was the extent of such use?

Ans. The first I saw of this iron was at McMurray's on Biddle street. I know that since 1874 it has been in general use in the State of Maine—also used in New York and other places that I can't think of now. Millions of cans are soldered yearly with them.

36th Inter. Have you used these irons yourself, at your estabment; and, if yea, to what extent? (Objected to.)

453 Ans. I have, and in our business we have soldered hundreds of thousands of cans with them since the year 1874.

37th Inter. What amount of skill is required to use such an iron? (Objected to.)

Ans. It does not require any skilled labor—any boy or girl can use them after a few minutes' practice.

38th Inter. Look at Complainants' Exhibit "Mallory Notice No. 9," and state if you know in whose handwriting it is?

Ans. It is the handwriting of my brother, Perez B. Burnham.

39th Inter. What connection had Mr. Perez B. Burnham with Mr. Lang in 1874?

Ans. He kept the books of the concern and conducted most of his correspondence.

40th Inter. Where is Perez B. Burnham now?

Ans. He is in Europe.

Cross examined by Mr. BROWN:

1st Cross-Interrogatory. Had you ever used irons like Burnham-Bostwick and Burnham-Barker, except in the experiments you have made here in Baltimore?

Answer. No, sir.

2d Cross-Inter. Did you ever see such irons until you came to Baltimore; and, if you did, when and where?

Ans. I have never seen the Burnham-Bostwick, but I have seen an iron similar to Burnham-Barker in Portland, Maine, in the year 1873 or 1874.

3d Cross-Inter. Who had it?

Ans. Mr. Lang.

4th Cross-Inter. What was done with it?

Ans. I don't know.

5th Cross-Inter. Was it used practically by anybody?

Ans. That one was not. Some were made from steel very much like it, which were used practically.

454 6th Cross-Inter. Were those made from steel, like Defendants' Exhibit McMurray No. 2, now before you?

Ans. They were.

7th Cross-Inter. Were those cans, marked Burnham Can, processed?

Ans. I presume they were, I did not see the operation; they were

taken to the bath-room, and I took them out of the pan after they came out of the bath.

GEO. BURNHAM, JR.

Subscribed and sworn to before me, this 13th day of April, 1880.

ISAAC BROOKS, JR., *Examiner.*

Then adjourned.

April 4th. Commission met; all counsel present.

George W. Floyd.

GEORGE W. FLOYD, a witness produced on behalf of the complainants, after being duly sworn, deposes and says, as follows:

1st Interrogatory. State your name, age, residence, and occupation?

Answer. My name is George W. Floyd; I am twenty-six years of age; I live 190 William St.; I am a capper and can-maker; I have been capping about eleven years; I have been can making about seven years.

2d Inter. What kind of tools have you used for capping cans?

Ans. I have used the straight iron, and machines of different shapes. The first machine I ever used was one that J. G.
455 Kraft & Co. had; the second machine was Ewalt & Tillery's. I used a machine called the Debow. I used the Barker and Bostwick. I used these machines different ways.

3d Inter. Have you the Barker and Bostwick tool here which you used?

Ans. I have; they are Exhibits Burnham-Barker and Burnham-Bostwick.

4th Inter. When did you use those tools, and where?

Ans. The 6th of April last, at Mr. McMurray & Co.

5th Inter. What did you cap with them?

Ans. Oysters.

6th Inter. Have you any of the cans here which you capped with those irons? If yea, please produce them.

Ans. I have, and I now produce and file them, marked Complainants' Exhibit "Floyd Can."

7th Inter. Will you now take the Burnham-Barker iron, and explain the mode in which you used that iron in capping the cans? (Objected to.)

Ans. I take the movable rod in my right, and the machine in my left hand, holding on by the upper part of the handle; I then place the movable rod first on the cap, then I put the iron down and move it back and forth over the solder in the crease of the pan, holding the movable rod at the same time upon the cap, then I still hold the rod on the cap, and lift the iron up until the solder hardens, which completes the process; I cap cans left-handed, but can work with either hand.

8th Inter. Will you now take the Burnham-Bostwick Iron, and explain how you used that iron? (Objected to.)

Ans. I first place the central rod on the cap, then place the soldering iron over the central rod, then place my finger on the top of the central rod to steady it; I then rotate the iron in the crease of the cap; then lift it up and over the central rod, leaving the central rod remain on the cap until the solder hardens, and the process is complete.

456 9th Inter. How many cans did you cap with that Barker iron, and how many with the Bostwick?

Ans. I capped forty-three cans with the Barker iron, and forty-two with the Bostwick.

10th Inter. Did you make a mistake in capping any of the cans with either of those irons? (Objected to.)

Ans. No, sir.

11th Inter. Are you able to tell which of these cans are capped with the Barker, and which with the Bostwick; if yea, which are they?

Ans. Those marked Nos, 1, 2, and 3 were capped with the Bostwick, and those marked Nos. 4 and 5 were capped with the Barker iron.

12th Inter. How many cans did you see capped with those irons, other than those you did yourself?

Ans. I could not tell, but there were a great many more than I capped.

13th Inter. Are you a judge of good capping when you see it?

Ans. I am.

14th Inter. How does the work upon those cans compare with other first-class work?

Ans. It is just as neat as any of them.

15th Inter. Are the cans which you have filed selected cans, or were the rest equally as well done as those? (Objected to.)

Ans. The others were just as perfect as these; every can of them was capped while I was there.

16th Inter. In using the Barker iron, what trouble did you have from turning your fingers whilst using it?

Ans. None.

17th Inter. How hot did the movable rod and the handle of that iron get when you held them with your hands?

Ans. It got warm; I could just feel that it was warm; I could put it against my face; the copper was red hot at the time.

18th Inter. You say you could put it against your face; did you try it against your face?

457 Ans. I did.

19th Inter. What trouble did you have about the recess—the upper part—burning the cap on the can?

Ans. None.

20th Inter. Were those cans all capped with a hole in the cap or not?

Ans. No, sir, not all of them.

21st Inter. How many were there that had no hole in the cap?

Ans. Fourteen.

22d Inter. What trouble did you experience in the can blowing and raising the cap, making pin-holes through the solder, in those cans which had no hole in the cap?

Ans. None at all, they capped just as well as the rest of them.

23d Inter. Did those cans which had no hole in the cap have a hole anywhere else in the can whilst capping?

Ans. No, sir, not that I know of—there was no vent in the top of the can, and I marked them at the bottom, and there was none there.

24th Inter. What are in those cans?

Ans. Oysters.

25th Inter. What kind of oysters; how prepared?

Ans. Cove oysters, regular standard; they were prepared in warm liquor, the same as usual.

26th Inter. Were these oysters cooked or not?

Ans. Yes.

27th Inter. Were the cans properly filled or not?

Ans. I saw no difference between them and any other standard filled.

28th Inter. What kind of solder did you use during your capping operation?

Ans. The wire solder and the drop solder.

29th Inter. What was the difference between the work of the wire solder and the drop solder?

Ans. I could not see any.

458 30th Inter. How does the work done with these irons compare with the work done with the Ewalt & Tillery iron? (Objected to.)

Ans. I don't see any difference in them. I have worked both irons. I have worked the Tillery iron since 1873, and am working the Debow iron now.

31st Inter. Which of the irons will hold the heat the longest and cap the most cans without re-heating?

Ans. That is just according to the size of the copper. Some use three pounds and some use two pounds.

32d Inter. How do these irons compare in rapidity of work with the Tillery and Debow? (Objected to.)

Ans. I think with a little practice I can cap as many cans with the Burnham, Barker, and Bostwick irons as I can with the others.

33d Inter. Were those cans which you capped and the exhibits which you have filed processed or not?

Ans. Yes, sir.

34th Inter. In using the Bostwick iron, what difficulty did you experience in obtaining an even pressure?

Ans. None. It would naturally work itself and find the crease.

35th Inter. What difficulty did you experience in holding the rod with your hand?

Ans. I did not experience any. Being a little short was the only objection. (Witness has his finger on the short rod of Burnham-Bostwick.)

36th Inter. When you put the top of the Barker iron to your cheek, how long had it been soldering?

Ans. I had capped forty-three cans with it.

37th Inter. Who were present during the time you were capping with these irons?

Ans. Mr. Ewalt, Mr. Tillery, Mr. McMurray, Mr. Lang, and another gentleman; I have forgotten his name—Mr. Goode.

38th Inter. In using the Debow or Tillery irons, how often do the coppers have to be forged?

459 Ans. That is just according to how many cans you cap with them: I used a two pound copper Debow machine yesterday, and capped about thirty-nine hundred cans; I had to forge the iron twice, and it was forged when I got it, and I also used at the same time an old copper iron—a Debow machine; it was forged when I commenced using it, and I wore the forge off.

39th Inter. Please state if you can generally, in a fair day's work with one machine of the Debow or Tillery pattern, how often the coppers in those machines would have to be forged?

Ans. I judge about three times in an average day's work.

Cross-examined by Messrs. BROWN and SMITH:

1st Cross-Interrogatory. By whom are you employed now?

Ans. Moore & Brady.

2d Cross-Inter. How long have you been employed there?

Ans. Since from about the 5th or 6th of March.

3d Cross-Inter. Was it in their packing house you used the Burnham-Bostwick and Burnham-Barker?

Ans. No, sir.

4th Cross-Inter. How came you to use these irons?

Ans. Mr. Tillery came round to see me and asked me if I ever worked any machine beside his, and I said yes; then he asked me if I would not meet him next morning at nine o'clock to look at some machines and see what I thought of them; I worked the machines then at Mr. McMurray's.

5th Cross-Inter. How long have you known Jno. A. Tillery?

Ans. I think it was between 1872 and 1873 that I got acquainted with him.

6th Cross-Inter. Is he a friend of yours? (Objected to.)

Ans. No more than any other workman I have worked with or bosses I have worked under; I treat him just as I treat the rest.

460 7th Cross-Inter. What iron do you use at Moore & Brady's?

Ans. The Debow.

8th Cross-Inter. Have you ever seen irons like the Burnham-

Bostwick and Burnham-Barker used anywhere, except these two exhibits. (Objected to.)

Ans. Mr. Fisher has a steel iron something like that. A. Fisher & Co., who pack on the corner of West and Howard streets.

9th Cross-Inter. Describe the iron A. Fisher & Co. use. (Objected to.)

Ans. It is a solid steel like the Burnham-Barker. I never have noticed the machine particularly.

10th Cross-Inter. Has it a wire at the side. (Objected to.)

Ans. That I could not tell you as I have never noticed it that close.

11th Cross-Inter. Excepting Fisher's iron, you have never seen any other in use like those two have you? (Objected to.)

Ans. I would not like to say they were exactly like them.

12th Cross-Inter. How many different packing houses have you ever worked in?

Ans. I could not tell you that.

13th Cross-Inter. Please name them?

Ans. I can name some, D. D. Mallory, Schoemberg's, J. G. Kraft, Fick & Chase, T. T. Price, Hampton, Virginia, I was never employed at McMurray's; I have capped cans there.

14th Cross-Inter. What irons were used in these different packing houses?

Ans. Tillery's, Ewalt's, Debow's, a machine McMurray caps with, I don't know its name, the Burleigh Machine, and Burnham-Bostwick and Barker.

15th Cross-Inter. Which iron of all these you have mentioned was most generally used in these different packing houses?

461 Ans. At Mallory's the Ewalt & Tillery, also at Schoemberg's; Kraft used the Burleigh machine, Fick & Chase had Debow's iron; Mr. McMurray uses a capping machine, like Exhibit McMurray No. 1; the Burleigh machine was a steel one, worked with a rod like Exhibit "Portland Iron;" I also worked at Fisher's and he used a steel iron, that is all I heard it called, it was a round iron, I don't think you used a rod with it; I never worked it myself; when at Fisher's I used an Ewalt & Tillery iron.

16th Cross-Inter. When did you work at Kraft's?

Ans. In 1872 and 1873.

17th Cross-Inter. You have said among other irons that have been used in these different packing houses, you have seen the Bostwick and Barker irons used; please state in whose packing house you saw either of them.

Ans. I saw them in Mr. McMurray's, and used them there.

18th Cross-Inter. You mean on the 6th of April, do you?

Ans. Yes.

19th Cross-Inter. And that is the only time and place, is it not?

Ans. I could not say, I have seen so many machines in working around in the different shops.

20th Cross-Inter. Please show us which of the cans filed by you,

and capped by you, has no vent? (Objected to, as no cap has been filed without a vent.)

Ans. Witness hands the Examiner a can, No. 1, and says,) this has no capping vent; it had no vent at all whilst I was capping it.

21st Cross-Inter. Have you ever seen cans capped without this vent, except when you were experimenting at Mr. McMurray's the other day? (The word "experiment" objected to.)

Ans. Yes, I have capped them occasionally myself without a vent, when I would come across a cap without a vent, I would cap it.

462 22d Cross-Inter. How often has this happened?

Ans. I could not say how often it has happened, but it often happens.

23d Cross-Inter. It is a very rare thing, is it not?

Ans. It is; it is not intended, but I have seen them capped many a time without any more trouble than the rest; last week we had a lot of caps which we had to send back, as they had no vents, but we used them two days, there were six of us; they had an indentation but no vent.

24th Cross-Inter. Do you mean to tell us that none of these caps which were used by the six men, during two days, had vents?

Ans. Some of them had; that was the reason we used them; we had not time to pick them out.

25th Cross-Inter. Did all but a few have no vents?

Ans. I judge about one-third of them had no vent; that is, they had no vent at all, only a little impression.

26th Cross-Inter. Give the names of the other five cappers.

Ans. George Bailey, John Mitchel, Joe Insco, Edward Carr, and a man by the name of Whiting.

27th Cross-Inter. How often did you heat the iron in capping the forty-two cans with the Burnham-Barker Iron?

Ans. Once to each tray of fourteen; I could have capped thirty cans with it easily, without re-heating, but I had to wait for trays.

28th Cross-Inter. How long did you have to wait between trays?

Ans. I could not tell you, but say about ten minutes.

29th Inter. While you were waiting did you keep the iron in the furnace.

Ans. No, sir; because the first heating of the iron kept it warm all the while, and I merely put it in the mouth of the pot to keep the heat there.

30th Cross-Inter. You did not use the iron, for say half a day, capping continuously, as if you were using this iron in your regular work, did you?

463 Ans. No, sir; but whilst I was capping I made just as good time.

31st Cross-Inter. You capped three trays with them, did you not?

Ans. Yes.

32d Cross-Inter. And between each tray there was an intermission of a few minutes, was there not?

Ans. I said before about ten minutes.

33d Cross-Inter. When you are engaged at your regular place of employment capping cans, you are kept supplied with cans for capping all the while, are you not?

Ans. Sometimes we are, and sometimes we are not.

34th Cross-Inter. Were you the other day when you capped about thirty-nine hundred?

Ans. Yes.

35th Cross-Inter. When you are capping at that rate, you have to keep heating your iron constantly, do you not?

Ans. Yes.

36th Cross-Inter. You have never made any such use as that of the Barker iron, have you?

Ans. No, sir; I have never worked with it a whole day.

37th Cross-Inter. You can't tell the effect then, that the constant heating of the iron in the Barker iron would have upon the movable rod, can you?

Ans. No, sir, not a bit; it would be almost as cool as it is now. I can't tell what the effect would be upon it if you heated it all day.

38th Cross-Inter. If you were to use this iron and keep heating it as it became necessary, without the intermission between trays, would not the movable rod or wire get hotter every time you heated it?

Ans. No, sir; I had it red hot—almost hot enough to burn the tin off.

39th Cross-Inter. What would prevent the rod from getting hotter?

Ans. I don't see where it ought to get hotter in this iron than in the Ewalt & Tillery machine.

464 40th Cross-Inter. Is the rod in the Ewalt & Tillery machine put in the fire pot?

Ans. Yes, sir; I put mine in the fire to keep the vent open.

41st Cross-Inter. Do you every time you heat the Ewalt & Tillery iron put it in the fire pot, with the rod and iron in the same relative position, as when you are capping with them?

Ans. When the soldering iron is in the pot, say four inches, I withdrew the centre rod, so that simply the point may be in the fire to keep the vent clear.

42d Cross-Inter. Now please state, whether or not in Burnham-Barker iron you can draw the rod out so that simply the point is in the fire.

Ans. I should not think it would be in the fire more than the other one, the Tillery.

43d Cross-Inter. Do you place in heating the soldering iron in the Barker machine the whole soldering iron proper in the fire?

Ans. You put it in half way; I had it on a coal fire; I stuck it in about half way while preparing my tray; it heated sufficient to cap with.

44th Cross-Inter. In soldering with the Barker iron, how far did you run the iron back and forth?

Ans. I just bearly moved it. (Witness places the iron on the cap and moves it about a quarter of an inch, at the same time holding the movable rod with his hand.)

45th Cross-Inter. In using the drop solder was that movement sufficient to distribute it entirely around the cap?

Ans. Yes.

46th Cross-Inter. With a single drop of solder did that movement distribute it entirely around the cap?

Ans. Yes.

47th Cross-Inter. Please tell us if the iron was simply moved a quarter of an inch; what then was about the iron to carry the solder entirely around the cap. (Objected to.)

465 Ans. When the solder sweated, it floated itself and the iron carried it around. I capped a couple by putting the iron down straight and giving it a tremble.

48th Cross-Inter. You have, during your examination, referred frequently to a memorandum in your possession; please state who made that out; please produce and file it?

Ans. Mr. Goode gave it to me, I requested him to get me one. I herewith file it, marked Floyd Memorandum.

49th Cross-Inter. How do you know that that memorandum is correct?

Ans. It is correct, according to the marks.

50th Cross-Inter. That is all you know about it?

Ans. Yes; I know it corresponds with my marks.

51st Cross-Inter. How do you know that the cans which you have filed have been processed?

Ans. I know because they would not keep till this time without being processed.

52d Cross-Inter. Is that the only way?

Ans. Yes, that is the only way I can tell, without using a little judgment.

53d Cross-Inter. In using the Bostwick iron, is not some pressure required on the handle to cause the solder to flow around the crease?

Ans. No, sir, not if the iron fits the crease.

54th Cross-Inter. Will not the pressure required to turn the iron affect the evenness with which the iron will run?

Ans. No, sir, it did not do it with me when working.

55th Cross-Inter. How many cans did you cap with the Bostwick on?

Ans. Forty-three.

56th Cross-Inter. Was there any intermission between the trays?

Ans. Just about the same as when I was capping with the Barker iron.

57th Cross-Inter. What did you do with the soldering part of the iron during this intermission?

466 Ans. It sat in the fire pot, about half way, just inside the furnace door.

58th Cross-Inter. Where was the central rod during that time?

Ans. I took it out.

59th Cross-Inter. You used several of these rods while capping these trays, did you not?

Ans. I always used but one.

60th Cross-Inter. Why did you say a moment ago, they had several of those setting on the caps?

Ans. They had them sitting on the caps; I took them off and capped the cans with one.

61st Cross-Inter. Who put them on?

Ans. Indeed, I could not tell you.

62d Cross-Inter. Were the trays brought to you with one of these rods on each cap?

Ans. No, sir; I think the cans had caps on them, but I don't think there was anything on the top of the caps.

63d Cross-Inter. When were these rods put on the caps then?

Ans. I guess they were put on when they prepared the cans for capping.

64th Cross-Inter. Who did this?

Ans. All hands who were standing round put them on; I could not say what one person did it, for I do not know.

65th Cross-Inter. What did they put them on for?

Ans. I don't know; I did not see any advantage.

66th Cross-Inter. Don't you suppose they thought that one would get too hot?

Ans. They could not have thought of that, for I used but one myself all along; I don't know what they thought.

67th Cross-Inter. Were these centre rods placed on each tray full?

Ans. No, sir.

68th Cross-inter. On how many?

Ans. It is hard to tell; I don't know of any but one tray.

467 69th Cross-Inter. Can you tell what would be the effect on the centre rod, if using that rod, say for half a day, as you ordinarily cap, as to heating it?

Ans. It did not get warm with the few cans I capped with it.

70th Cross-Inter. Was Mr. McMuarry packing oysters in the ordinary way on that day?

Ans. I did not go into the packing house; all that I saw were standards.

71st Cross-Inter. Where did you do this capping?

Ans. In a kind of a store-room.

72d Cross-Inter. Were they not simply making an experiment with these two irons?

Ans. Not that I know of; they only asked me to try my hand and see what I could do.

GEORGE W. FLOYD.

Subscribed and sworn to before me, this 14th day of April, 1880.
ISAAC BROOKS, JR., *Examiner.*

Then adjourned.

April 15th, 1880. Commission met; Messrs. Brown & Smith appearing on behalf of defendants, and Mr. Price on behalf of complainants.

Thomas H. Coakley.

THOMAS H. COAKLEY, a witness produced on behalf of complainants, after being duly sworn, deposes and says as follows:

1st Interrogatory. State your name, age, residence, and occupation?

468 Ans. My name is Thomas H. Coakley. I am thirty-two years of age. I reside No. 32 Hamburg Street. I am a processor and capper.

2d Inter. What kind of irons have you used in capping cans, and how long have you used them?

Ans. I have used the old straight iron, the Ewalt & Tillery iron, the Barker iron, and Bostwick iron. I had been capping with the straight iron two or three years before I used the Ewalt & Tillery iron, I have been using the Ewalt & Tillery iron off and on, for about eight years.

3d Inter. You also had charge of packing establishments as superintendent, did you not?

Ans. Yes.

4th Inter. What irons have you seen used, other than those you have stated you used yourself, and when, whilst in charge of the factories as superintendent, and used under your supervision?

Ans. Mr. Lang's patent, at Long Island; it was John Romain, he was a fruit and vegetable packer, the house was a large one. The iron Romain used was similar to Exhibit McMurray No. 2.

5th Inter. You say you have capped with the Barker and Bostwick irons, can you identify those irons as those with which you capped?

Ans. Yes. Exhibit Burnham, Barker, and Bostwick are the irons.

6th Inter. Please state when and where you used those irons?

Ans. On the 6th day of April, 1880, at Mr. Louis McMurray's packing establishment.

7th Inter. What was in the cans that you capped?

Ans. Oysters.

8th Inter. How were the oysters prepared before they were put in the cans?

Ans. I did not see them before they were put in the cans.

9th Inter. Were those oysters cooked or raw?

469 Ans. Those I saw in the cans must have been partly cooked.

10th Inter. Were they hot or cold?

Ans. Hot.

11th Inter. Hot as usual, as oysters that are to be capped?

Ans. Yes, sir.

12th Inter. How many cans did you cap with those Barker and Bostwick irons?

Ans. I could not say exactly; about seventy-five or a hundred I should say.

13th Inter. Can you identify the cans which you so capped or some of them; and, if yea, please do so?

Ans. I can.

14th Inter. Look at the cans I now show you, and say whether those are the cans you capped?

Ans. They are, and I herewith file them, marked Coakley Cans, Nos. 1, 2, 3, 4, 5, and 6.

15th Inter. How did these tools work in capping these cans?

Ans. Perfectly.

16th Inter. You are a judge of good capping when you see it, are you not?

Ans. I think so.

17th Int. Do you think this work on these cans good work or not?

Ans. I do think it good work.

18th Inter. How does the workmanship compare in quality with the Ewalt & Tillery iron?

Ans. It is equal.

19th Inter. How does it compare in rapidity of workmanship?

Ans. Equal.

20th Inter. What amount of skill is required in using the old straight soldering iron, like Exhibit Platt, in capping cans?

Ans. You have to have a good deal of practice before you can cap any amount of cans.

470 21st Inter. What skill is required in the use of the Ewalt & Tillery iron?

Ans. It requires a little skill to use it.

22d Inter. How often do the Ewalt & Tillery irons have to be forged?

Ans. Working all day, you have to forge them twice.

23d Inter. Does it require skill to forge them?

Ans. It does.

24th Inter. What amount of skill is required in using the Barker and Bostwick iron in capping?

Ans. Not so much.

25th Inter. With unskilled labor, which of these irons will do the quickest and best work?

Ans. The Barker iron.

26th Inter. Will you be kind enough to tell the Examiner how you used that Barker iron in capping irons?

Ans. You put your rod down first, lower your iron down on the cap, hold the cap down firm by holding your hand on the rod, and

44½ Cross-Inter. How does the overheating of the iron raise the cap?

Ans. Too much heat will raise the cap.

45th Cross-Inter. Why?

Ans. I can't say why.

46th Cross-Inter. Was the top of the centre rod io the Bostwick iron, whilst you were capping with it, just as cold as it is now?

Ans. No, sir, it was not hot enough to burn you.

47th Cross-Inter. Did you use one or more of the centre rods of the Bostwick iron, whilst you were capping with it?

Ans. I mostly used one, as I found it worked better than using more.

48th Cross-Inter. Did you process these oysters sent to Moore & Brady's?

Ans. I did.

48th Cross-Inter. Did you cap them?

Ans. No, sir.

Re-direct examination:

1st Re-direct Interrogatory. Can you tell when cans have been processed by examining them?

Ans. I can, if they have not been cleaned and scrubbed up, provided they are put through a chemical bath.

477 2d Re-direct Inter. Look at the cans marked Coakley Cans, and say whether they have been processed.

Ans. My opinion is that they have, but they have been cleaned up. It is nine days since I capped them, and they would have spoiled by this time had they not been processed.

Re-cross-examined by Messrs. BROWN and SMITH:

1st Re-cross-Interrogatory. Coakley Cans Nos. 2, 3, 4, and 5 seem to have two drops of solder on the cap, whilst Nos. 1 and 6 had but one drop; explain why that is.

Answer. Nos. 6 and 1 have been exhausted since they were capped up.

2d Re-cross-Inter. Why are the two drops on the four cans mentioned?

Ans. Because those that have two drops had a vent in the cap, and those that have but one drop have no vent.

THOS. H. COAKLEY.

Subscribed and sworn to before me, this 15th day of April, 1880.

ISAAC BROOKS, JR., *Examiner.*

John Casey.

JOHN CASEY, a witness heretofore examined on behalf of the defendants, desires to make an explanation, and complainants' counsel calls him for that purpose.

Some day last week I was going along the street and I stopped

Mr. Louis McMurray, and in conversation he told me that I did not understand what I was swearing about. (Counsel for
478 defendants objects to any conversation between the witness and Mr. McMurray.) I told him then that I did not like to be under the impression that I was swearing falsely, and I told him I would like to be convinced of the idea, and he gave me an invitation over to his factory to see the operation of these irons—the Burnham-Bostwick and Barker. Before I went over there I told my friend, Mr. Ruth, of the conversation between Mr. McMurray and myself, then Mr. Ruth and I went over together. I think it was last Saturday. I saw both the Burnham-Bostwick and Barker cap cans, and I worked them myself, and I found that they were an entirely different iron from what I thought they were in the first place.

1st Interrogatory. Go on and explain what you did with them, what kind of cans you capped, how many, what were in the cans, whether the caps had vents or not; whether you obtained an even pressure, whether you burned your hand, and to the best of your recollection all that occurred? (Objected to.)

Ans. I capped two pound cans, about twenty I guess, the cans had oysters in them, some of the caps had vents and some had no vents; I obtained an evenness of pressure; I did not burn my hand.

2d Inter. Were those oysters hot or cold, or were they raw or cooked? (Objected to.)

Ans. They were hot and partly cooked.

3d Inter. What is your opinion of the practical working of these two irons as compared with other good irons, say, for example, the Ewalt & Tillery and the Debow?

Ans. I think the Burnham-Bostwick is the most practical, as a boy can use it.

Cross-examined by Messrs. BROWN and SMITH:

1st Cross-Interrogatory. Have you ever stated to the de-
479 fendants in this case, or their counsel, that you desired to make this explanation?

Ans. No, sir.

JOHN CASEY.

Subscribed and sworn to before me this 15th day of April, 1880.
ISAAC BROOKS, JR., *Examiner.*

Francis J. Ruth.

FRANCIS J. RUTH, a witness heretofore examined on behalf of the defendants, desires to make an explanation, and complainants' counsel calls him for that purpose.

1st Interrogatory. Have you ever seen complainants' counsel with relation to this explanation which you are about to make?

Answer. I have not.

2d Inter. If you have any explanation to make with regard to any

testimony you have heretofore given in this cause, please do so in your own way.

Ans. My testimony heretofore has been candid and honest in my belief at that time, but I have changed my views in regard to the practicability of the irons Burnham-Barker and Burnham-Bostwick, and believe them to be superior to any iron I have ever seen to work.

3d Inter. State, if you please, if you have ever seen them work, and where and when. (Objected to.)

Ans. I have seen them work at Mr. McMurray's establishment one day last week. I have tried them myself. I capped cans with them—about twelve.

4th Inter. Will you please to state what were in those cans, how they were filled, what kind of solder was used in capping,
480 whether the cans had a vent hole or not, and generally the circumstances. (Objected to.)

Ans. Oysters; steamed systers; the cans were what were called light weights; we used both drop solder and wire solder; some of the cans had a vent hole and some had not.

5th Inter. What was the differences between those capped with a vent hole and those without? (Objected to.)

Ans. I saw none.

6th Inter. What was the difference between those capped with the wire solder and those with the drop solder? (Objected to.)

Ans. The wire solder was more pliable.

7th Inter. What was the difference in the result and the character of the work when done? (Objected to.)

Ans. It was the same.

8th Inter. In using the Barker iron what difficulty did you experience in burning your hand? (Objected to.)

Ans. None.

9th Inter. In using the Bostwick iron, did you hold your hand on the top of the rod or not? (Objected to.)

Ans. I did.

10th Inter. What difficulty did you experience in burning your hand with the rod? (Objected to.)

Ans. None.

11th Inter. What difficulty did you find in getting an even pressure on the solder? (Objected to.)

Ans. None whatever.

Cross-examined by Mr. SMITH:

1st Cross-Interrogatory. Have you ever stated to the defendants, or their counsel, that you desired to made an explanation?

Answer. I have not. FRANCIS J. RUTH.

481 Subscribed and sworn to before me, this 15th day of April, 1880.

ISAAC BROOKS, JR., *Examiner.*

Samuel A. Ewalt.—Re-called.

SAMUEL A. EWALT, a witness re-called on behalf of the complainants, deposes and says as follows:

1st Interrogatory. Mr. Mallory has stated that he requested you to assist the defendants' counsel, in this case, to work up the defense, is this true?

Ans. No, sir.

2d Inter. Did you at any time have any conversation with Mr. Mallory, in reference to a compromise or consolidation of this case with the complainants; and, if yea, state where and what occurred?

Ans. Mr. Mallory sent for me to come to his office, sometime in the latter part of November, or early part of December; he invited me into his room adjoining his private office, and stated, that it was to my and Tillery's interest to effect a compromise. Mr. Mallory went out and invited Mr. Tillery in, and stated the same to Mr. Tillery, that it was to our interest to have a compromise, and he requested us to try to see Mr. McMurray and effect that compromise, also to write to Mr. Lang, and inform him that it was to our interest to make a compromise. I then asked Mr. Mallory if I should use his name in both instances, to Mr. McMurray and Mr. Lang, as I had no proposition to make to them—he reflected a moment, and said yes. I went to see Mr. McMurray, Mr. McMurray declined to have anything to say about a compromise. I wrote to Mr. Lang, but never received an answer.

482 3d Inter. What interest did he say you would have in case the compromise was effected?

Ans. He was to give us—Tillery and myself—the entire interest in the patent, and reserve the shop-right for himself.

4th Inter. What was intended to be done with your interest in the patent which Mallory was to give you, provided the compromise could be effected? (Objected to.)

Ans. I was to receive one-half of the sales, I suppose.

5th Inter. What did these sales have to do with the compromise? (Objected to.)

Ans. The sale would put us in business; he stated that it would give us work enough to run four or five hands.

6th Inter. Did he say anything in relation to a consolidation of the different irons; and, if yea, what was said? (Objected to.)

Ans. He did—that it would be to our benefit to consolidate.

7th Inter. In one of the letters, marked Mallory Letter No. 6, from Tillery to Lang, he says, "Ewalt tells me you will make it all right with me for the time I lose;" did you ever tell Tillery any such thing as this? (Objected to.)

Ans. No, sir.

8th Inter. What was the first circular iron rotating about a rod which you ever saw? (Objected to.)

Ans. McMurray and Hollingsworth.

8th Inter. When did you first see that iron?

Ans. In the early part of 1871; Mr. Hollingsworth brought it to my shop.

10th Inter. Was that before or after you and Tillery had invented your patent iron? (Objected to.)

Ans. It was before.

11th Inter. Whilst you were getting up that iron, do you or not know whether Tillery went to see the McMurray iron? (Objected to.)

Ans. He did.

12th Inter. Did he report what he had seen; and, if yea, to whom did he report? (Objected to.)

483 Ans. He did, to Mr. Mallory.

13th Inter. Prior to the time this suit was brought, did you receive any instruction from Mr. Mallory to bring suit against packers for infringement of the Ewalt & Tillery patents; and, if yea, state what happened in relation thereto. (Objected to.)

Ans. I did; I informed Mr. Mallory that Debow had infringed our patent, and, according to agreement, he was to defend us against infringement. He told me to go and see different lawyers, and learn from them what they would enter suit for. I saw several, and stated the case; I reported to Mr. Mallory; he said he would enter suit against Kensett, or some other responsible house, as soon as he returned from his trip; on his return I went to see him again, and he said he did not think he would get enough out of the suits to pay expenses. I have been instructed by Mr. Mallory twice. About a year ago I informed Mr. Mallory that a gentleman by the name of Henry had infringed upon our iron; he again instructed me to see the lawyers about it, and enter suit against Kensett, or some other responsible party, as he was determined to stop all infringers. When I went to report he was out of town.

(The whole answer objected to, as not in rebuttal.)

14th Inter. When you went to report what? (Objected to.)

Ans. The price the lawyers would charge to take the case.

15th Inter. Did you go to see him when he returned? (Objected to.)

Ans. No; he sent for me, and I went.

16th Inter. Had this present suit been brought when he returned?

Ans. I think it had.

484 17th Inter. Since your former testimony in this case, has or has not Mr. Mallory sought interviews with you; if yea, how often? (Objected to.)

Ans. He has several times.

18th Inter. With whom were you at work during the past season?

Ans. Albert Fisher & Co.

19th Inter. How long did you work with them, and what was the character of the work you were doing?

Ans. During the entire peach season I was superintending the paring department; I had a general supervision of the house.

20th Inter. What kind of soldering iron was used at Fisher's? (Objected to.)

Ans. He uses an iron similar to the Bostwick iron; we called it a Lang iron there.

21st Inter. If you have an iron, such as was used at Fisher's, please produce it. (Objected to; the filing of the iron also objected to.)

Ans. I have, and I herewith produce it, marked Complainants' Exhibit "Fisher."

22d Inter. State if you know how long that iron has been used by the house of Fisher & Co.

(Question objected to unless witness states his means of information.)

Ans. Since the latter part of 1874, or the early part of 1875.

23d Inter. How do you know this?

Ans. I visited the establishment often, and they have used it for the last three years in Baltimore; I also visited their factory in Cincinnati, and they used it there.

24th Inter. What amount of business in the way of hermetically sealed goods do the firm of Fisher & Co. do, as compared with other firms? (Objected to.)

485 Ans. They are one of the largest establishments in the West.

25th Inter. How does their house in Baltimore compare with other houses here in the amount of business? (Objected to.)

Ans. It compares in peaches with any large house in Baltimore, that is all they pack here.

Then adjourned.

April 16th, 1880.—Commission met, Mr. Price appearing for complainants, and Messrs. Brown & Smith for defendants.

Cross-examined by Messrs. Brown & Smith:

1st Cross-Interrogatory. Look at defendants' exhibit, Portland Iron, and state if you know anything about that iron prior to its being filed as an exhibit in this case?

Ans. It has been in my possession since 1874, until somewhere near about the 1st of October last. At the request of defendants' counsel I brought it to his office.

2d Cross-Inter. Are you positive that defendants' counsel asked you to bring it to his office?

Ans. I am.

3d Cross-Inter. When and where was the request made?

Ans. In Messrs. Brown & Smith's office.

4th Cross-Inter. How came you to be there?

Ans. At the request of Mr. Luddington, one of the firm D. D. Mallory & Co.

5th Cross-Inter. At the time Mr. Mallory sent for you and re-

Ans. In the early part of 1871; Mr. Hollingsworth brought it to my shop.

10th Inter. Was that before or after you and Tillery had invented your patent iron? (Objected to.)

Ans. It was before.

11th Inter. Whilst you were getting up that iron, do you or not know whether Tillery went to see the McMurray iron? (Objected to.)

Ans. He did.

12th Inter. Did he report what he had seen; and, if yea, to whom did he report? (Objected to.)

483 Ans. He did, to M. Mallory.

13th Inter. Prior to the time this suit was brought, did you receive any instruction from Mr. Mallory to bring suit against packers for infringement of the Ewalt & Tillery patents; and, if yea, state what happened in relation thereto. (Objected to.)

Ans. I did; I informed Mr. Mallory that Debow had infringed our patent, and, according to agreement, he was to defend us against infringement. He told me to go and see different lawyers, and learn from them what they would enter suit for. I saw several, and stated the case; I reported to Mr. Mallory; he said he would enter suit against Kensett, or some other responsible house, as soon as he returned from his trip; on his return I went to see him again, and he said he did not think he would get enough out of the suits to pay expenses. I have been instructed by Mr. Mallory twice. About a year ago I informed Mr. Mallory that a gentleman by the name of Henry had infringed upon our iron; he again instructed me to see the lawyers about it, and enter suit against Kensett, or some other responsible party, as he was determined to stop all infringers. When I went to report he was out of town.

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18th Inter. With whom were you at work during the past season?

Ans. Albert Fisher & Co.

19th Inter. How long did you work with them, and what was the character of the work you were doing?

Ans. During the entire peach season I was superintending the paring department; I had a general supervision of the house.

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Ans. It compares in peaches with any large house in Baltimore, that is all they pack here.

Then adjourned.

April 16th, 1880.—Commission met, Mr. Price appearing for complainants, and Messrs. Brown & Smith for defendants.

Cross-examined by Messrs. Brown & Smith:

1st Cross-Interrogatory. Look at defendants' exhibit, Portland Iron, and state if you know anything about that iron prior to its being filed as an exhibit in this case?

Ans. It has been in my possession since 1874, until somewhere near about the 1st of October last. At the request of defendants' counsel I brought it to his office.

2d Cross-Inter. Are you positive that defendants' counsel asked you to bring it to his office?

Ans. I am.

3d Cross-Inter. When and where was the request made?

Ans. In Messrs. Brown & Smith's office.

4th Cross-Inter. How came you to be there?

Ans. At the request of Mr. Luddington, one of the firm D. D. Mallory & Co.

5th Cross-Inter. At the time Mr. Mallory sent for you and re-

quested you and Tillery to effect a compromise, were you then employed by Mr. McMurray?

Ans. Yes, sir.

6th Cross-Inter. Did you state to him at that time that you were so employed.

486 Ans. No, sir.

7th Cross-Inter. Had you any reason to suppose that he then knew that you were in Mr. McMurray's employ?

Ans. No.

8th Cross-Inter. How do you know that Tillery went to Mr. McMurray's place, before patenting the Ewalt & Tillery iron, to see the McMurray and Hollingsworth iron?

Ans. Because he came back and reported to me that we had got away from the McMurray and Hollingsworth iron.

9th Cross-Inter. Had you then invented your iron?

Ans. No, sir.

10th Cross-Inter. How then did you know that you had gotten away from the McMurray and Hollingsworth iron?

Ans. Because we had a point on our rod and they had none.

11th Cross-Inter. Then you had invented your iron?

Ans. We had completed the model at that time.

12th Cross-Inter. Was that model like Complainants' Exhibit Ewalt & Tillery model?

Ans. It was the same principle, but it had the hinge on it.

13th Cross-Inter. What was Mr. Tillery's object in going to see this iron?

Ans. That I can't say. Mr. Mallory sent him there.

14th Cross-Inter. Did you hear Mr. Mallory give him the instructions?

Ans. Mr. Mallory told me he had sent him there.

15th Cross-Inter. State when he told you and what he told you.

Ans. Sometime in 1871, he told me he had sent Tillery to Mr. McMurray's to see if we could get around it, or if we had infringed it.

16th Cross-Inter. At the same time the model of your iron was completed, was it not?

Ans. It was.

17th Cross-Inter. Was that Tillery's first visit to Mr. McMurray's packing house?

487 Ans. That I cannot say, or how often he was there.

18th Cross-Inter. What lawyers did you go to see about bringing suits for infringements upon the Ewalt & Tillery iron?

Ans. J. H. B. Latrobe, William A. Stewart, and Brown and Smith.

19th Cross-Inter. Mr. Mallory was unwilling to begin legal proceedings, was he not?

Ans. When I reported to him the price, he said he did not think we could get enough out of the iron to pay the expenses of the lawyer's fees.

20th Cross-Inter. What has Mr. Mallory wanted to see you about, since you formerly testified?

Ans. He wanted to know if I had seen Mr. Tillery or heard from Mr. Lang.

21st Cross-Inter. Was it your opinion that your iron had got away from the McMurray & Hollingsworth iron?

Ans. Yes; by having a point on the end of the rod?

22d Cross-Inter. Was that the only difference?

Ans. The Ewalt & Tillery iron was entirely different in appearance from the McMurray & Hollingsworth.

23d Cross-Inter. Then you mean to say that your iron had the point while the McMurray & Hollingsworth iron had not, and that they were different in appearance, that in all other respects they were alike, do you?

Ans. I do not.

24th Cross-Inter. State what you do mean to say, as to the likeness or difference between these irons?

Ans. One was steel and the other was copper.

25th Cross-Inter. Look at the exhibits that have been filed in this case, and state which one, if any, is the McMurray & Hollingsworth iron?

Ans. Defendants' Exhibit McMurray No. 2.

26th Cross-Inter. You made oath did you not, at the time you and Tillery took out letters patent, that you were the original and first inventors of these patents?

488 Ans. We did on the point of our rod, that we were the original inventors of that point.

27th Cross-Inter. Did you invent simply a rod with a point?

Ans. We invented a combination tool with a centre rod with a point on the end of it, and we received letters patent for that rod separately.

28th Cross-Inter. Is that the only invention for which you took out letters patent?

Ans. No, sir; we took out two or three.

29th Cross-Inter. For what, beside the rod with the point?

Ans. For making cans, hot plate for soldering cans, also a patent for rotating the iron with cog wheels.

30th Cross-Inter. Are you still in Mr. McMurray's employ?

Ans. I am.

SAM'L A. EWALT.

Subscribed and sworn to before me on this 16th day of April, 1880.

ISAAC BROOKS, JR., *Examiner.*

Edward Renneburg.

EDWARD RENNEBURG, a witness produced on behalf of the complainants, after being duly sworn, deposes and says, as follows:

First Interrogatory. State your name, age, residence, and occupation?

Answer. My name is Edward Renneburg; I am thirty-six years of age; I live 329 Alice Ann street; I am a blacksmith.

2d Inter. Look at Exhibits J. T. Jones, and J. T. Jones No. 2, Burris, Casey, and Weinbrenner, and state if you know who made these Exhibits?

489 Ans. I made all the machines, except a part in Exhibit Casey.

3d Inter. State when these Exhibits were made, and for whom they were made?

Ans. I made them all in the months of February or March last; I made them for Mr. Kegan.

4th Inter. Who is Mr. Kegan?

Ans. He is in the employ of D. D. Mallory & Co., as foreman, I guess.

5th Inter. Look at Exhibit J. T. Jones, and tell me what instructions you received, if any, from Mr. Kegan, in making that tool. (Objected to.)

Ans. He gave me a drawing on a piece of paper, in lead pencil.

6th Inter. What else; did he tell you how to make it?

Ans. I got it wrong at first; I got the handle underneath, and I had to raise it.

7th Inter. Who showed you how and when to raise it?

Ans. Mr. Kegan.

8th Inter. Now look at Exhibit J. T. Jones No. 2, and state what instructions, if any, you received from Mr. Kegan in making that tool?

Ans. He gave me ideas about it, and marked it off?

9th Inter. How did he mark it off?

Ans. He marked it off with chalk, and I made it wrong at first. At first I got the handle in the place where the movable rod should be. Mr. Kegan told me how to change and alter it.

10th Inter. Look at Exhibit Weinbrenner, and state what instructions, if any, you received from Mr. Kegan in making that tool.

Ans. He gave me the idea from a drill-press, and that was the way I made it.

11th Inter. What other ideas did he give you about it?

Ans. He told me I would have to make it so that the copper would work round, and the machine would raise at the same time.

490 12th Inter. Did you make it right the first time? (Objected to as leading.)

Ans. I did.

13th Inter. When you had finished it, did it suit him? (Objected to as leading.)

Ans. No, sir, it did not suit him then; he wanted the arm which contains the set screw for holding the copper straight instead of bent with an elbow.

14th Inter. Why did you not make it to suit him—with the arm straight?

Ans. I thought it would not work well.

15th Inter. Did you tell him you thought it would not work well? (Objected to as leading.)

Ans. Yes, sir.

16th Inter. I understand you then, you left it as it is now?

Ans. Yes.

17th Inter. Now look at Exhibit Burris, and state, if you please, what instructions you received from Mr. Kegan in making that tool?

Ans. He told me to make it the same as a brace, and he marked it off I think, but am not sure.

18th Inter. What other instructions did he give you, if any?

Ans. That is all I know; I made it, and he was pleased.

19th Inter. Did you make any other similar to this for him? (Objected to as leading.)

Ans. I made another.

20th Inter. What was the difference between the other and this one?

Ans. In the other one the rod worked with a spring.

21st Inter. Who told you to make that with the rod working with a spring?

Ans. Mr. Kegan.

22d Inter. What became of it?

Ans. I gave it to Mr. Kegan.

491 23d Inter. Now, look at Exhibit Casey, and tell us what instructions, if any, Mr. Kegan gave you for making that machine?

Ans. He marked it off with a lead pencil on a piece of paper.

24th Inter. You have stated in your testimony that a part of this machine you did not make; tell us which part?

Ans. The revolving iron table, and pedestal upon which the can is to rest, were not made by me, except the washer, which I made.

25th Inter. Who made this table and pedestal?

Ans. I don't know.

26th Inter. Who gave it to you?

Ans. Mr. Kegan.

27th Inter. Who mounted this apparatus upon the board?

Ans. I did.

28th Inter. Who directed you how to do so?

Ans. Mr. Kegan.

29th Inter. In making these machines, or any of them, were you shown any patent papers and descriptions by which to make them?

Ans. No, sir.

30th Inter. Have you charged these machines in your books, and will your books show to whom they are charged?

Ans. I have, and they will show.

31st Inter. To whom are they charged in your books?

Ans. To Mr. Kegan.

(Counsel for defendants objects to this testimony, as not in rebuttal.)

No cross-examination.

ED. RENNEBURG.

Subscribed and sworn to before me, this 16th day of April, 1880.
ISAAC BROOKS, JR., *Examiner.*

492 *William P. Herbert.*

WILLIAM P. HERBERT, a witness produced on behalf of the complainants, after being duly sworn, deposes and says, as follows:

1st Interrogatory. State your name, age, residence, and occupation.

Answer. My name is William P. Herbert; I am thirty-three years of age; I reside in Baltimore; I am general superintendent of Louis McMurray's oyster and fruit packing establishment, in Baltimore.

2d Inter. What knowledge have you of the oyster and fruit packing business, how long have you been engaged in connection therewith, and by what means did you obtain your information?

Ans. In 1869 I went into the can-goods brokerage business, selling goods for nearly all the packing houses in the city; I had access to nearly all the factories—to all parts of them; I saw the goods being prepared and packed; I sold large quantities for nearly every house in Baltimore until 1873; in the spring I gave up my brokerage business, and went with John L. Shriver & Bro., Baltimore, who were large oyster and fruit packers; there I had full knowledge and management of the packing done by them, and controlled all the departments connected with the factory; in the fall of 1875 I entered the employ of Louis McMurray as general superintendent, and have been there ever since; all the work done in the factory is under my supervision.

3d Inter. During the time, from 1869 to 1873, when you had access to these different can-good factories, what was the character of the soldering irons that were generally used by the trade?

Ans. Nearly all of them used the old straight iron.

4th Inter. Since you have been with the firm of McMurray & Co., what kind of soldering irons have you used there?

493 Ans. We have used a round circular iron, known by me as the McMurray iron. It is like Exhibit McMurray No. 1.

5th Inter. How was that iron used?

Ans. After being properly heated, and the weight placed on the cap with the solder and acid, you place the iron over the weight, bringing it in the crease, pressing it slightly, and rotating the iron slightly, you then lift it off.

6th Inter. Were all the goods of that house capped with circu-

lar irons like those since you have been in the employ of Louis McMurray & Co.? (Objected to, as leading.)

Ans. No.

7th Inter. What other iron did you use?

Ans. For one or two days in the summer of 1879 we used the old straight iron.

8th Inter. Except one or two days in the summer of 1879, what iron had been used for capping all the goods of that house since you have been with the firm?

Ans. The McMurray iron.

9th Inter. Do you know what is meant by reclaiming from cappers for cans which are improperly or badly capped; if yea, what is meant by that term?

Ans. I do. It is customary at some factories to retain a certain amount of each capper's wages to pay for cans capped by them which spoil from faulty capping.

10th Inter. Since you have been with the firm of McMurray & Co. what amount of reclamations have been made from cappers for faulty capping with the McMurray iron?

Ans. Not a cent.

11th Inter. What amount of canned goods have been capped up with the McMurray iron since you have been with the firm?

Ans. We have averaged from a million to a million and a half each year.

12th Inter. Do I understand you to say that these million or a million and a half of cans are done by the house of McMurray in Baltimore city, or in Baltimore city and Frederick city altogether?

494 Ans. I refer only to Baltimore city.

13th Inter. Do you know the number of cans capped by that firm annually at Frederick; if yea, how many?

Ans. I have an idea, but don't know.

14th Inter. Look at the tools now shown you, marked Burnham-Bostwick and Burnham-Barker, and state if you have ever seen those irons at work, capping cans; and, if yea, when and where?

(Counsel for defendants objects to all the testimony prior to this interrogatory, as not in rebuttal.)

Ans. I have, in the spring of 1880, at Louis McMurray & Co.'s.

15th Inter. State who worked those irons; what was done with them at that time?

Ans. Mr. McMurray, Mr. Goode, Mr. Casey, Mr. Ruth, myself, and several others; I cannot recall all the persons present. They capped oysters with them.

16th Inter. What kind of solder was used in capping?

Ans. Both wire and drop.

17th Inter. What was the difference in the quality of the work done with the wire solder, and that done with the drop solder?

Ans. In my judgment none.

18th Inter. Were the caps, which were placed upon the cans at that time, provided with a vent hole or not, while the capping was going on?

Ans. Some were, and some were not.

19th Inter. What was the difference in the work done by those tools upon the cans which had caps with holes in them and those which had not?

Ans. No difference.

20th Inter. Was there or not any vent hole in the can of those which were capped without the hole in the cap?

Ans. No.

495 21st Inter. What proportion of the work was done upon cans or caps with vent holes and those without?

Ans. I think it was about even.

22d Inter. How many cans were capped with these irons during this spring at McMurray & Co.'s?

Ans. I don't know; a good many.

23d Inter. What was done with these cans after they were capped?

Ans. They were processed in the regular way.

24th Inter. Where are they now?

Ans. Most of them are in the factory.

25th Inter. What do you intend doing with these cans. (Objected to.)

Ans. We hope to sell them.

26th Inter. Have you any knowledge of circular irons used in the regular business of canning goods other than at the factory of Louis McMurray & Co.; and, if yea, where?

Ans. I have; I have seen them in use at William H. Cohen & Co., New York city; John L. Shriver & Bros., Baltimore.

Cross-examined by Messrs. BROWN & SMITH:

1st Cross-Interrogatory. Are you a practical capper?

Answer. I can cap as well as most people.

2d Cross-Inter. How long did you follow that business exclusively?

A. Never.

3d Cross-Inter. Before oysters are capped are they or not steamed?

Ans. Yes; they are.

4th Cross-Inter. Is not a boiling liquor poured into the cans before they are capped?

Ans. In some cases it is.

5th Cross-Inter. What is the usual way of preparing oysters for capping?

496 Ans. They are steamed in the shell to facilitate the shucking, then washed off in cold water I think, then put in cans and the liquor, or salt and water, as the case may be, is poured over them.

6th Cross-Inter. In the establishments with which you have been connected, have they not used a hot liquor?

Ans. In one they did, and in the other they did not.

7th Cross-Inter. What do they do at Louis McMurray & Co.'s?

Ans. We fill the oyster cans with a warm liquor.

8th Cross-Inter. The cans which you speak of as having been capped with the two irons before you, were capped last week, were they not?

Ans. Some of them were and some were capped previously.

9th Cross-Inter. How long previous?

Ans. I should suppose a month or six weeks.

10th Cross-Inter. Who did that first capping?

Ans. Mr. McMurray, Mr. Goode, myself, and possibly some others.

11th Cross-Inter. You have been making experiments, and were so doing at that time, were you not? (Objected to.)

Ans. We were trying the irons.

12th Cross-Inter. What has been your observation as to the use of vents in the caps or cans; do you know any house that does not cap with a vent?

Ans. I don't consider the use of a vent absolutely necessary; I knew of no house in the hermetically sealed trade that caps cans without a vent.

13th Cross-Inter. What kind of solder is used in your packing house?

Ans. We use wire solder usually.

14th Cross-Inter. In using the McMurray iron, is it necessary to rotate the iron at all?

Ans. I have capped without doing so, but it is usual to rotate it some.

497 15th Cross-Inter. Would there be any difference as to rotating it if you used the drop solder?

Ans. No.

Re-direct:

1st Re-direct Interrogatory. You have said on cross-examination "that you can cap as well as most people." With what kind of an iron can you cap as well as most people? (Objected to.)

Ans. With the McMurray iron.

2d Re-direct Inter. What kind of job of capping can you do with the old straight iron?

Ans. Not a very good one; I would have to use more solder and consume more time.

3d Re-direct Inter. Were the oysters that were placed in the cans that you saw capped up this spring with the Barker and Bostwick iron prepared in the usual way in which the house of McMurray & Co. usually prepare their oysters for canning or not? (Objected to.)

Ans. Most of them were; exactly as we usually prepare them for canning.

Re-cross by Messrs. BROWN and SMITH:

1st Re-cross-Interrogatory. If there is no difference between the drop solder and the wire solder, why does McMurray & Co. use only the wire?

Ans. I don't know; I suppose the use of wire solder enables a greater regularity to be observed in the quantity used.

2d Re-cross-Inter. Explain how?

Ans. The machinery makes the wire solder very uniform in size, whereas I have never seen a drop cutter cut the drops all exactly the same size.

498 3d Re-Cross-Inter. Do you know any reason why it is easier to put the same quantity in a ring of solder than it is to put it in a drop?

Ans. I think I have just answered that question, that the machinery made the wire solder more uniform than the drop cutter.

4th Re-Cross-Inter. Is not a drop more easily cut than a ring is made?

Ans. I don't know which is the easiest to do; both of them are easy to make.

WM. P. HERBERT.

Subscribed and sworn to before me, this 16th day of April, 1880.

ISAAC BROOKS, JR., *Examiner.*

Then adjourned.

April 19th, 1880. Commission met; all counsel present.

R. D. Williams, recalled.

R. D. Williams, a witness on behalf of the complainants, being recalled, deposes and says as follows:

1st Interrogatory. Please select from the tools heretofore filed in this cause those which, in your opinion, are made in accordance with the Barker and Bostwick Patents. (Objected to.)

Ans. J. D. W. No. 1 and 2, Lang No. 1 and 2, Burnham-Barker, J. T. Jones No. 2, Barker Wooden Handles—these are made in accordance with the Barker Patent. Burnham-Bostwick, Bostwick-Spear, J. T. Jones, are made in accordance with the Bostwick Patent.

499 2d Inter. Have you read the testimony of Ellis Spear, who has been examined as an expert by the defendants?

Ans. I have.

3d Inter. I call your attention now to a portion of the testimony of Ellis Spear, contained on page 183 of the printed testimony, wherein referring to the Barker re-issue patent, he says: "I think the device is erroneously described in the first and second claims, and there is nothing in the device or the original patents to justify the terms 'to be rotated about said rod.' I do not find anything in the orignal patent of Barker to warrant that expression, or to indicate that the inventor contemplated that operation of the machine,

nor does the apparatus itself, as illustrated in the drawings or described in the specification, appear to me to be adapted to operate in that way." Will you be good enough to examine the original Barker patent and compare it with the re-issue patent, and state if you agree with Mr. Spear in that statement or not; and, if not, why not? (Objected to.)

Ans. I differ with General Spear entirely. The first claim of the re-issue calls for the combination in a soldering machine of a rod adapted to hold a can cap in place, with a soldering iron mounted upon and arranged to be rotated about said rod. And the second claim embodies, in addition to this, the feature of the iron sliding upon the rod. I find in the original patent language plainly indicative of the inventor's contemplation of this precise construction and incident mode of operation, as follows: The rod D is stated in the orignal patent to be "pushed down through the disk, and placed upon the centre of the cover to hold it." The disk is then to be pushed down in contact with the solder till it is melted, and then turned back and forth till the solder is spread evenly round the lid. The disk is then to be withdrawn with the rod STILL pressed upon the lid. Inasmuch as this back and forth movement is to be made "in contact with the solder," and with the rod "still" pressed upon the lid, the motion is of necessity about the rod and rotary.

500 As to the second claim in addition to the above, I would state that the sliding of the iron with reference to the rod, is plainly indicated by the statement that the disk is "withdrawn," with the rod 'still pressed upon the lid."

With reference to General Spear's statement, that the device does not appear to him to be adapted to operate in that way, I would state that I know by experience that it is adapted to operate in that way; I have so operated it.

4th Inter. Calling your attention further to the testimony of Mr. Spear, on page 183, he says, "the whole device appears to me to be adapted to be turned by its handle, which is the upper end of the fixed central rod." Do you agree Mr. Spear in that statement; and, if so, why not?

Ans. The device is susceptible of operation in that way.

6th Inter. You have stated in one of your answers, that you know by experience that the tool was adapted to operate by rotating about the rod, and that you had so operated it. State your experience in that regard,

Ans. On January 8th, 1880, I capped up a number of cans with the exhibits marked J. D. W. No. 1 and 2, and Lang No. 1. Some of them I capped in the manner I have described. I now produce these cans heretofore filed, marked J. D. W. Nos. 1, 2, and 3, one capped by each of the exhibits. J. D. W. No. 1 was capped by "placing solder around the lid," pushing down the rod to hold the can cap in place,and rotating the iron upon the solder till it was melted, the rod being held upon the lid; the disk was then withdrawn, the rod being still held upon the lid, until the solder hardened.

I may add, that previous to this occasion I had never capped a can, nor seen one capped.

6th Inter. During the operation you have described, was the tool rotated about the rod, or was the rod allowed to slide over the top of the cap?

Ans. In capping with the Exhibit J. D. W. No. 1, the rod was held upon the cap, the iron rotating slightly about it. In capping Nos. 2 and 3, the rod was allowed to slide over the top of the cap.

501 7th Inter. Look at Exhibit Barker Wooden Handles, while I read to you a portion of the testimony of Mr. Spear in relation thereto, on page 189, in answer to the 18th Cross-Interrogatory where he says: "It is the same, except that the annular face is changed;" please examine that exhibit and also the Barker original patent, and state what you find in said patent in relation to the annular face of the tool, and whether or not you agree with Mr. Spear in that statement, and give your reason for your opinion?

Ans. I find in the original patent a statement that the disk is made with a recess in the under side to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover, and the patentee further states that the disk is to be pushed down IN CONTACT with the solder. Now, the "change" referred to by General Spear, consists in beveling the soldering edge of the disk; in view of the fact, that in such cans as the exhibits filed in this cause, and those generally used in the trade, there is a V-shaped groove around the cap; this beveling is an absolute necessity to make the iron conform to the requirement in the patent, that it shall be "pushed down in contact with the solder." The change, therefore, is one plainly called for by the patent, if the iron is to be used in capping cans of the ordinary construction.

8th Inter. Take that exhibit in your hand, and state if that tool can be rotated about the rod; and, if so, how much?

Ans. Yes; more than a complete revolution.

9th Inter. Look at Exhibit J. T. Jones No. 2, and compare it with the letters patent of Barker, both original and re-issue, and state whether that tool is or is not made in accordance with the specification and claims therein, supposing it to be intended to be used upon cans like those filed in this cause, and generally used in the trade?

Ans. No, it is not. The disk has no recess in the under side, such as to give room for the can caps, which I see on the cans filed in this cause; and, further, if it had such recess, it would be

502 insusceptible of fulfilling another requirement of the patent, viz.: That it shall be pushed down in contact with the solder.

10th Inter. When you capped up those cans on the 8th of January, with the tools which you have designated, how many of them did you cap, whilst holding the rod firmly down upon the cap, and

how many of them did you cap by turning the tool and allowing the rod to slide over the top of the cap?

Ans. Respectively, one and two dozen.

11th Inter. In capping cans by turning the tools and allowing the rod to slide over the cap, whilst the tool is turning, what difficulty did you experience from the rod displacing the cap, or turning it one side?

Ans. None whatever; it had not and could not have such effect.

12th Inter. Referring still further to the testimony of Mr. Spear, on page 183, he says, "It appears also to me, that the soldering iron is not correctly described in the fourth claim of the Barker patent, as 'mounted' upon the movable or side rod. The movable rod is attached to the soldering iron, and its handle as an auxiliary thereto, being movable in relation to the iron, as the fixed part." State, if you please, whether you agree with Mr. Spear in that statement, or not; and, if not, why not?

Ans. I cannot agree with the witness here, inasmuch as the rod D passes through the disk, and the latter is adapted to be rotated about and slid upon the rod, and especially in view of the fact, that this latter motion of the disk is made while the rod is held as a fixture to retain the can cap in place, pending the setting of the solder; it appears to me plain that the disk is mounted upon the rod.

13th Inter. Still confining yourself to the testimony on page 183, Mr. Spear says, "Referring to the Bostwick patent, I think the first claim erroneously describes the device shown, as the central pivotal rod. What is called a central pivotal rod in the Re-issue patent, appears to me, both from the original description, and from
503 the device shown and described in the patent to be a weight, adapted to hold the cap of the can to be soldered by its weight, and not to serve as a fixed pivot, about which the tool is to be rotated, and by which it is to be steadied and directed." Say whether you agree with Mr. Spear, or not, confining yourself to the original patent.

Ans. I do not. While the "guiding rod" undoubtedly operates by its weight to hold down the can cap, its function as a pivotal rod is not thereby excluded, and were the iron to be used in soldering a flat cap, the rod, considered as a pivot alone would be essential.

14th Inter. Of what height does Bostwick in his original patent say his soldering tool shall be made?

Ans. I see no limitation in the language of the patent.

15th Inter. Of what height does he tell you to make the guiding rod?

Ans. I see no limitation in that respect.

16th Inter. I now call your attention to the tool marked Bostwick-Spear, with a long rod inserted therein, and I ask you if the material elements of the Bostwick patent are in any way changed by the introduction of this long rod?

Ans. Not at all.

17th Int. Does it require any practical mechanical knowledge to determine that question, or do you confine yourself exclusively to the language in the Bostwick letters patent?

Ans. My answer was based upon my reading of the patent.

18th Inter. Confining yourself now to the language of the specifications and claims contained in the Bostwick Original and Re-issue Patent, I now insert the gas pipe in the copper tool of the Bostwick-Spear Exhibit, marked Bostwick Extension, and leaving the long rod remain inserted, I ask you if the material elements of the Bostwick patent are in any way changed by the insertion of this pipe?

Ans. Not at all.

19th Inter. Suppose a party should make and construct a machine precisely similar to this as it now stands, but instead of ro-
504 tating or turning the tool by means of the horizontal handle, he should rotate it by placing his hand upon the gas pipe, would, in your opinion, such a party infringe the Bostwick patent or not?

Ans. Undoubtedly. The change you have described appears to me merely a formal one, in nowise altering or affecting the operation of the device.

20th Inter. Still further proceeding, I now take out the horizontal handle, and ask you to suppose a party to use the tool without said handle, by rotating it with his hand upon the gas pipe, would such a party escape the charge of infringement of the Bostwick patent?

Ans. Certainly not.

21st Inter. I now take out the long rod, and insert it upside down, and repeat my last question, with a tool constructed in that way?

Ans. I repeat my answer, and say certainly not.

22d Inter. Look at that tool as at present constructed, and compare the same with Complainant's Exhibit McMurray Patent, and state what are the essential differences between them, confining yourself to the descriptions contained in the original Bostwick and Re-issue patent. (Objected to.)

Ans. I perceive none.

23d Inter. Mr. Spear, in answer to the 6th interrogatory-in-chief, on page 182, says: "The Exhibit Ewalt & Tillery Model is an infringement of the first and second claims, or the terms of the claims as they now stand in the Barker patent, and possibly in the fourth claim of same patent, unless these claims are more narrowly limited by the specifications." Look at the specifications of the Barker patent, both original and re-issue, and state whether, in your opinion, the said claims are more narrowly limited or not by said specifications.

Ans. They are not.

24th Inter. On page 195, please read the answer to the 43d cross-interrogatory of Mr. Spear in relation to the infringements
505 of the third and fifth claims of the Barker re-issue patents.

State whether you agree with Mr. Spear in the statements therein made; and, if not, why not?

Ans. I do not; I consider both the claims infringed, and for the reason that while the rod of the Ewalt & Tillery Exhibit does not literally pass through the tool itself, as covered by the third claim of the Barker re-issue, it passes through a shank, to which the tool is rigidly connected; and while the tool in the Ewalt & Tillery Exhibit has not a recess B in its under side, as covered by the fifth claim of the Barker re-issue, it has its substantial equivalent. I consider the changes in both respects merely colorable.

25th Inter. Do you agree with Mr. Spear or not in this statement that the third claim is limited to the tool or die, with the rod D passing through said tool?

Ans. I do not, for the reason that the function of the rod is independent of the fact that it passes literally through the tool.

26th Inter. Do you or not agree with Mr. Spear in the statement that the fifth claim in the Barker re-issue is limited to the tool or disk, with a recess in its under side; and if not, why not?

Ans. I do not, and for the reason that this recess is stated to be for the purpose of giving room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover.

27th Inter. In the same answer Mr. Spear says: "I see nothing of this in the Ewalt & Tillery Exhibit;" please state if you agree with him in that statement; and if not, why not?

Ans. I do not, and for the reason that the Ewalt & Tillery Exhibit affords ample space for the convex lid or cap of the can, and confines the soldering process to the outer edge of the lid or cover, and differs from the Barker in this respect only in degree—the difference being that between a segment and a complete circle.

28th Inter. I now call your attention to Mr. Spear's testimony upon the Ewalt & Tillery model, in answer to the 8th
506 interrogatory, on page 184, in which he says: "I think the Ewalt & Tillery device patentable, notwithstanding the prior devices of Barker and Bostwick, for the reason that it has a central rod, by means of which the cap can be held down whilst the iron is rotated about it, and which at the same time serves as a central pivot upon which the soldering iron is turned and guided;" please state if you agree with Mr. Spear in his statement and reasons; and if not, why not?

Ans. I do not, and for the reason that the identical feature upon which he assumes the patentability of the Ewalt & Tillery iron, to wit, the central pivotal rod for holding the cap down is found in the Bostwick patent; I do not by this mean to say that I do not consider the Ewalt & Tillery device patentable at all, but certainly not for the reason advanced by General Spear.

29th Inter. State, if you please, if there be anything patentable in your opinion in the Ewalt & Tillery device, and what is it, having in view the prior patents of the Barker and Bostwick.

Ans. Yes; the Ewalt & Tillery iron was patentable for the features in which the patentees stated their invention to consist, to wit, the radial adjustment of the tool broadly, and specifically the particular means for effecting this radial adjustment, which features are not shown or described in the Barker and Bostwick patents.

30th Inter. Look at Defendants' Exhibits Tillery Nos. 1 and 2, and state whether the claims in these exhibits embrace anything claimed in the Barker or Bostwick.

Ans. They do not; they are laid to features not shown or described in the Barker or Bostwick patents, and the statements of invention in both patents show that the inventors did not contemplate as their inventions, nor seek to cover by their claims anything shown or described in the Barker or Bostwick.

31st Inter. Look at the three Exhibits Tillery Nos. 1, 2, and 3, and state whether the devices or apparatus shown therein are claimed or described in any of their parts in the Barker and Bostwick?

507 Ans. The claims of Barker cover devices constructed according to Tillery Nos. 1 and 3, which are also in my judgment subordinate to the first claim of the Bostwick. The device shows in Tillery No. 2, is not covered by either.

32d Inter. Look at Defendants Exhibit Hay, and state whether you have read and understand the same?

Ans. I have.

33d Inter. Point out, if you please, in said exhibit, the points of resemblances and differences between it and the Barker and Bostwick Patents, Originals and Re-issues, and give your reasons for any opinion you may express?

Ans. The Hay Exhibit (being a certified copy of letters patent, granted to James L. Gray, April 2d, 1867,) shows and describes a device entirely different from the Bostwick and Barker, both in construction and mode of operation. By it the can is revolved, while a soldering iron, having no connection with or particular relation to a cap holding device, is held rigidly upon the seam to be soldered. It shows no iron mounted upon or arranged to rotate about a pivotal rod, nor a weight enclosed by the iron for holding the cap, pending the soldering operation.

34th Inter. Please compare Exhibit Hay with the first claim of the Barker Re-issue, and continue your comparison through the claims of said patent?

Then adjourned.

April 21st, 1880. Commission met: Messrs. BROWN & SMITH appearing on behalf of defendants, and Mr. PRICE on behalf of complainants.

The examination of the witness was then resumed.

Ans. I find the first claim of the Barker patent to cover the combination with the cap-holding rod, of a soldering iron mounted

upon and arranged to be rotated about said rod. Nothing of
508 the kind is shown or described in the Hay Exhibit. The second claim of the Barker patent covers the combination with the cap holding rod of the soldering iron, sliding upon and rotating about said rod. The third claim covers the feature of the cap-holding rod passing through the soldering tool. The fourth claim covers the soldering tool, conforming in shape to the cap to be soldered with an independently movable rod, and the fifth claim covers the tool, having a recess in its under side, in combination with, and mounted upon an independently movable rod D. None of these features are shown, described, or indicated in the Hay Exhibit.

35th Inter. Please make a comparison of Exhibit Hay with the Bostwick Patent.

Ans. The Bostwick Patent describes and claims—first, a tool for soldering can caps, consisting of an iron revolving about a central pivotal rod; and, secondly, the combination of a hollow iron with a separate and enclosed weight for steadying the can cap. Nothing of the sort is shown in the Hay; its iron is not hollow; it does not revolve at all, and there is no central pivotal rod about which the iron revolves.

36th Inter. Look at Defendants' Exhibit William Foust. State first if you have read and understood the same, compare said exhibit with the Barker and Bostwick patents, point out the differences and resemblances between them, and give your reason for any opinion you may express.

Ans. I have read and do understand the said exhibit; it resembles the Barker and Bostwick devices in that it has an annular edge for melting the solder, and there the resemblance ends; it neither shows nor describes the combination with the iron of a rod or weight, central or eccentric, pivotal or otherwise, and is in my judgment no anticipation of either the Barker or Bostwick inventions.

37th Inter. Look at Defendants' Exhibit Samuel Carson, and say if you have read and understand the same; and, if yea, compare said exhibit with the letters patent of Barker and Bostwick; point out the differences and resemblances between them, and give
509 your reasons for any opinion you may express.

Ans. I have read and do understand the same; I find Fig. 7 in the drawings to show a plan and section of a simple ring, of whose construction the following words in the specification are the only description: "Fig. 7 shows a plan and section of a tool for melting the solder in the groove, where the cover of the case or vessel is fastened." Conceiving as I do that the construction and use of this ring is substantially that of the Foust Exhibit, minus the handle of the latter, my last answer applies literally to the present question; no rod or weight, central or eccentric, pivotal or otherwise, is shown or described as combined with the ring. It is no anticipation of the Barker or Bostwick invention. The Carson invention is described to consist of "certain improvements for treating eggs for

purposes or food," and the apparatus used has no resemblance whatever to that described in the Barker and Bostwick Patents.

38th Inter. Look at Exhibit Casey, and compare the same with the Barker and Bostwick Patents.

Ans. Exhibit Casey consists of a revolving rest, and a rod attached to a pivoted arm above the same. It shows no iron-mounted eccentrically or otherwise upon a pivotal rod; no soldering iron mounted upon a rod, conforming in shape to the cap to be soldered, and no weight enclosed by an iron for holding the cap in place. It is radically different in construction and operation from the Barker and Bostwick, and is no anticipation of either.

Cross-examined by Mr. BROWN:

1st Cross-Interrogatory. Please state whether or not the Bostwick Patent is an infringement on the Barker Patent?

Ans. Yes, it is, of all five claims.

2d Cross-Inter. Look at the Defendants' Exhibit J. T. Jones, and state whether or not it is substantially the Bostwick Iron?

510 Ans. Yes.

3d Cross-Inter. Look at Defendants' Exhibit J. T. Jones No. 2, and state whether it is substantially the Barker iron?

Ans. Not if intended to be used upon any can cap that I ever saw, for the reason that it has "no recess in its under side to give room for the convex lid or cover," nor is it adapted to be "pushed down in contact with the solder," conceiving it to be intended to be used upon the conventional can cap. With these differences, it is substantially the Barker iron. Exhibit Lang No. 2, is the Barker iron.

4th Cross-Inter. Is Exhibit J. T. Jones an infringement upon Complainants' Exhibit Lang No. 2?

Ans. It is an infringement upon the Barker patent, and Exhibit Lang No. 2 is made in accordance with the said patent.

5th Cross-Inter. Then, inasmuch as the Bostwick patent is subsequent to the Barker patent, the Bostwick patent is void, is it not? (Objected to.)

Ans. Certainly not, and for the reason that its claims are laid to cover features not claimed in the Barker patent, precisely as the Ewalt & Tillery patent, although an infringement of both Barker and Bostwick is good for the differences in construction covered by its claims; it by no means follows that one patent is void, because subordinate to another.

6th Cross-Inter. Look at the Exhibits J. T. Jones and Lang No. 2, and if there is any patentable differences between the two, point out what that difference is?

Ans. In J. T. Jones the rod is central, whereas in Lang No. 2, it is not; and in J. T. Jones the rod is incidentally a "separate and enclosed weight;" these are patentable differences.

7th Cross-Inter. Are these all the patentable differences? (Objected to.)

Ans. So far as I can see, they are; to state with certainty every possible patentable difference, would involve on my part an absolutely accurate knowledge of the state of the art.

511 8th Cross-Inter. Barker then cannot explain that Bostwick uses this central enclosed weight? (Objected to.)

Ans. I presume not, since he, Barker, does not claim it in those terms. He might legitimately complain that Bostwick infringed him, but he could scarcely base that complaint on the ground that a "central" weight was his (Barker's) property.

9th Cross-Inter. Look at the Bostwick and Barker original and re-issue patents, and state whether either one of them claims a circular disk as a distinct claim?

Ans. Not *per se*.

10th Cross-Inter. Is there anything substantial in either J. T. Jones, or Lang No. 2, except the disk and handle in combination with the side rod of the Barker, and the central weight of the Bostwick?

Ans. Conceiving your question to include the features of the parts you have named, such, to give a simple instance, as the recess in the under side of the Barker, I should say not.

11th Cross-Inter. If, then, the enclosed central weight in the Bostwick is not an infringement of the side rod in the Barker, and neither Barker nor Bostwick claims the circular disk *per se*, please explain how the Bostwick iron, as shown by Exhibit J. T. Jones, can, in any particular, be an infringement upon Lang No. 2? (Objected to.)

Ans. Your question is predicated upon an assumption, which is not true in fact; what you call "an enclosed central weight" in the Bostwick, being the rod of J. T. Jones' Exhibit, is "a rod adapted to hold the can cap or lid in place," and it is combined "with a soldering iron, mounted upon and arranged to be rotated about said rod," and therefore the Bostwick invention, as embodied in J. T. Jones' Exhibit, is an infringement of the Barker.

12th Cross-Inter. Have you not stated that Barker, who has a side rod, cannot complain against Bostwick for using a central enclosed weight?

512 Ans. I said that Barker could not base his complaint on any assumption of ownership of a "central" weight in those terms, but that he might complain that Bostwick infringed his invention.

13th Cross-Inter. If the central weight is a different thing from the side rod of the Barker, and if neither the Barker nor Bostwick claim a circular disk, please explain how Barker can have any complaint against Bostwick for an infringement?

Ans. Barker is the first inventor of a soldering device consisting in a rod, which is incidentally a weight in combination with a soldering iron, mounted upon, sliding upon, and arranged to rotate about the said rod, as broadly covered in his claims: Bostwick uses these features, and is therefore an infringer, but his device differs

from the Barker in certain patentable particulars, which I have already pointed out; therefore, I repeat for the third time, that Barker could complain that the Bostwick device infringed his claims, although he could not base this complaint on the assumption that he claims these specific differences in terms.

14th Cross-Inter. The enclosed central weight in the Bostwick is patentably different then from the side rod in the Barker, is it not?

Ans. The second claim of the Bostwick patent is laid to cover the combination of a hollow iron, with a separate and enclosed weight for steadying the cap; this I consider patentable, notwithstanding the existence of the Barker patent.

15th Cross-Inter. Have you not said that the Bostwick patent is an infringement of every claim of the Barker patent?

Ans. If I did, it was a *lapsus linguæ*; I am at loss to understand how one *patent* can infringe another since the right granted by a patent is the "exclusive right to make, use, and vend the *thing* patented;" if I used the language that your question assumes, I used it in the sense that the *device* made according to the Bostwick patent is an infringement of the Barker patent.

513 15½ Cross-Inter. If the enclosed central weight is patentable, and is different from the side rod in the Barker, and the circular disk is not claimed by either one, how can the Bostwick be an infringemeent of the Barker?

Ans. Simply because Barker claims broadly the combination, in a soldering iron, of the rod and tool arranged as I have above stated, and Bostwick uses this combination. His device differs from Barker's in the particulars pointed out in his (Bostwick's) claims, and therefore, whilst patentable, is still subordinate to Barker.

16th Cross-Inter. If you divest the Barker iron of the side rod, and the Bostwick iron of the central rod, inasmuch as neither one of them claims the circular disk, would there be anything patentable left?

Ans. Your question assumes, as a former one, an absolutely accurate knowledge on my part of the state of the art; this, of course, I cannot assume to possess, and therefore cannot answer the question with certainty.

17th Cross-Inter. As far as your knowledge extends, would there be anything patentable left, assuming that neither one of them has claimed or would claim a circular disk?

Ans. I have an indistinct impression, that Examiner Stocking, of the United States Patent Office, called my attention on one occasion to an old English patent, showing a simple ring, somewhat similar to that of the Carson Exhibit filed it this cause. Indeed, I am not positive but that it was the same. Assuming such a disk to be old, I doubt whether a valid patent could be granted for merely attaching a handle to the disk, and the changes from the Barker and Bostwick inventions which your question assumes would leave little else of the devices.

18th Cross-Inter. You have said that Lang No. 2 is the Barker iron; could that side rod be termed a central circular weight?

Ans. Inasmuch as it is not central to the iron, certainly not.

514 19th Cross-Inter. Is it of sufficient thickness and weight to be called a weight, considered with reference to holding a cap down? (Objected to.)

Ans. I should say so certainly.

20th Cross-Inter. Do you think of its own weight, it will hold a cap down while being soldered?

Ans. Yes, I do.

21st Cross-Inter. Why do you think so?

Ans. Because it did so in my hands.

22d Cross-Inter. Did you, or not, have hold of that side rod with your fingers, whilst it held the cap down?

Ans. Not on every occasion. While capping cans on the occasion to which I have already referred to in my testimony, I was particular to cap cans in both ways, that is, allowing the rod to move around on the lid in some instances, and holding it with my hands in others.

23d Cross-Inter. Could the rod be termed a weight whilst traveling around on the cap?

Ans. Certainly, it was pressing on the cap all the time by its weight.

24th Cross-Inter. During the process of capping, whilst that little rod was turning on the cap, the ring of the circular disk was pressed upon the sides of the cap—now do you think that during that process, that side rod had the most remote effect in keeping the cap in place?

Ans. Of course it did; it served as an adjunct, and the rim of the disk might not, and probably was not, all the time, pressing evenly upon the edge of the cap all around. I now revolve the iron upon a can cap, and from the perfect steadiness of the motion, I am inclined to think that the annular edge is resting principally upon the cover groove.

25th Cross-Inter. When that iron is used without the side rod being held by the hand, can the side rod be considered a pivot, on which the circular disk revolves?

Ans. Certainly not.

26th Cross-Inter. What do you understand to be the scientific difference between oscillation and rotation?

515 Ans. The term "rotation," as I understand it from its etymology, means motion as of a wheel, that is, motion in the arc of a circle, about an axis or pivot. "Oscillation," I think, is a broader term, and while rotation may be oscillation, the latter is not restricted to motion in the arc of a circle.

27th Cross-Inter. Take Exhibit Lang No. 2, place it on the blank paper on the disk before you, take hold of the side rod with one hand, hold it down firmly, and turn the iron, and state whether the iron when so turned makes a circle?

Ans. Inasmuch as the rod passes through the iron, and was held still while the iron was turned, it follows necessarily that every part of the iron described a circle, or the arc of a circle about the rod.

28th Cross-Inter. Was the circle or arc of the circle the same size as the iron itself?

Ans. Necessarily not, a space was swept out upon the paper in the form of a ring, whose exterior radius was equal to the distance from the pivot rod to the edge of the disk, measured through the fixed rod.

29th Cross-Inter. Place that same iron on the top of a can with a cap, hold the side rod firmly in its place, rotate the iron, and state whether the iron when so rotated remains in the crease?

Ans. Certainly it does, rotation is not necessarily revolution, and revolution of the iron in capping cans, if the soldering edge of the iron be continuous, as is the case of *the* the exhibit, is neither necessary or desirable—a slight rotation, or as the patentee, Barker, expresses it, motion "back and forth," is all that is necessary.

30th Cross-Inter. If the iron is revolved will it remain in the crease, the side rod being held firmly on the cap?

Ans. No, then it will not.

31st Cross-Inter. Accepting your meaning of the word rotate, when you commenced to revolve that iron, did not the iron rotate from the very beginning?

516 Ans. Certainly it did; revolution is necessarily rotation but rotation is not necessarily revolution. Rotary motion, as I understand it, is simply motion in the arc of a circle, for however short a distance. The plain derivation of revolution, (re—again, and volvo—to turn,) means to my mind, motion in at least a complete circle or other continuous path.

32d Cross-Inter. If you hold that rod firmly in place, and turn the iron all the way round, or part of the way round, could it be scientifically said that the iron rotates or revolves about that rod?

Ans. It could not be truly stated otherwise.

33d Cross-Inter. Then, if that rod were placed through the extreme edge of that circular disk, and you hold the rod firmly in place, in your scientific judgment, the iron, when turned, would rotate about that rod?

Ans. It certainly would.

34th Cross-Inter. Do you consider that a side rod constructed like that is adapted or was intended to be adapted by the inventor to hold the cap in place while the operator rotated the iron?

Ans. Inasmuch as I know that it is so adapted, and for the reason that the inventor so states the operation of the device, I see no reason to doubt it. I repeat that but slight rotary motion is necessary, and with the device as shown, this is abundantly feasible.

35th Cross-Inter. Do you think that Barker contemplated that in the use of his iron, a person should hold the side rod during the process of capping; and, if so, upon what in his specifications or drawings do you base your opinion?

Ans. I do think that the inventor contemplated just that mode of operation, although the device is susceptible of operating without holding the rod. My statement is based upon the following language in his original patent: "The rod D is pushed down through the disk and placed upon the centre of the cover to hold it; the heated disk is then to be pushed down in contact with the solder or sealing material, till it is melted, then turned back and
517 forth till the solder is spread evenly around the lid. The disk is then to be withdrawn, with the rod D STILL pressed upon the lid, till the solder or sealing material sets or hardens." This use of these words "still pressed," plainly indicates to my mind an antecedent pressure pending the previous step, to wit, the "back and forth" movement of the iron.

36th Cross-Inter. If the side rod is placed upon the centre of the cap, will the circular edge of the disk rest in the crease?

Ans. No, but in capping a can, having but a very shallow groove, so that the soldering edge could be readily brought in contact with the solder, as shown in the drawings of the Barker patent, this would be immaterial.

37th Cross-Inter. Do you think then that it makes no difference that the circular disk rests in the groove or not?

Ans. Provided the circular disk be made to conform to the plain terms of the specifications, viz: That it be provided with "recess in its under side to give room for the convex cap of the can," and be so formed as to admit of its being "pushed down in contact with the solder," it would be constructed in accordance with the terms of the patent, and there would be no variation from it.

Complainants herewith file certified copy of File Wrapper and contents, in the matter of letters [patent] granted to Louis McMurray and Robert J. Hollingsworth, marked Complainants' Exhibit McMurray File Wrapper.

R. D. WILLIAMS.

Subscribed and sworn to before me, this 22d day of April, 1880.

ISAAC BROOKS, JR., *Examiner.*

Then adjourned.

518 April 20th, 1880. Commission met; present: Messrs. Brown and Smith, on behalf of defendants, and Mr. Price, on behalf of the complainants.

William Rosskamp.

WILLIAM ROSSKAMP, a witness produced on behalf of complainants, after being duly sworn, deposes and says, as follows:

1st Interrogatory. State your name, age, residence, and occupation?

Answer. My name is William Rosskamp; I am thirty-five years of age; I reside No. 187 S. Paca st.; I am a machinist; I am working at Stevenson & Plunkett, 45 N. Holliday st.

2d Inter. Look at Complainants' Exhibit J. D. W. No. 1, and state if you know who made it, and when and where it was made?

Ans. I made it at 45 N. Holiday street, at Stevenson & Plunkett's; I made it sometime during December.

3d Inter. What instructions did you receive, and from whom, for making that tool? (Objected to.)

Ans. I received the instructions from Louis McMurray to make a tool according to the description on this paper which I now file, marked Exhibit Rosskamp.

4th Inter. Did you receive any other instructions from McMurray, or from anybody else, in reference to making that exhibit?

Ans. No, sir.

5th Inter. How did you make it of proper size for working on cans? (Objected to.)

Ans. I made it to be used on a can with a head and cap like Complainants' Exhibit Rosskamp No. 1, which I now file.

519 6th Inter. Who, or what did you consult, with reference to making this tool, outside of the description contained in the letters patent, which you have just filed as Exhibit Rosskamp?

Ans. No one.

7th Inter. Do I understand you to say that you constructed that tool entirely from those letters patent, and without consulting or receiving instructions from any one in relation thereto? (Objected to.)

Ans. Yes, sir.

Cross-examined by Messrs. BROWN and SMITH:

1st Cross-Interrogatory. Who furnished you with Exhibit Rosskamp No. 1?

Answer. Mr. McMurray.

2d Cross-Inter. What did he tell you to do with it?

Ans. He told me to make a tool to be used on that cap.

3d Cross-Inter. Then it is not true that you received no other instructions, except to make it according to the letters patent, marked Rosskamp? (Objected to.)

Ans. I made it according to the description on Exhibit Rosskamp; Mr. McMurray at the same time handed me Exhibit Rosskamp No. 1; he told me to make a tool according to the description in Exhibit Rosskamp, to be used on that cap.

4th Cross-Inter. What did Exhibit Rosskamp No. 1 have to do with making Exhibit J. D. W. No. 1?

Ans. I could not make the iron unless I had a suitable size to go by, and the paper tells me that it has to be made to suit the lid or cap of the can, and of course I must have something of that description to make it by.

5th Cross-Inter. Is that the only use you made of the top and cap?

Ans. That is the only use I made of it.

6th Cross-Inter. In making J. D. W. No. 1 were you asked to

notice the drawings and follow them? (Objected to, on the ground that the drawings are not the patent.)

520 Ans. No, sir.

7th Cross-Inter. Were you told to pay no attention to the drawings?

Ans. I was.

8th Cross Inter. Is Exhibit J. D. W. No. 1, like the drawings in Exhibit Rosskamp?

Ans. Not exactly.

9th Cross-Inter. Where is the difference?

Ans. The difference is, that Exhibit J. D. W. No. 1, has a bevelled edge, and the drawings in Exhibit Rosskamp show a flat edge.

10th Cross-Inter. Did Mr. McMurray tell you to make the edge of that tool bevelled, so as to fit in the crease on the top of the can?

Ans. No, sir.

11th Cross-Inter. How then did you come to make it so?

Ans. According to the description given in Exhibit Rosskamp.

12th Cross-Inter. Point out where Exhibit Rosskamp describes that edge as being bevelled?

Ans. The descript on says: "make the disk, casting, or tool of sufficient thickness to retain the heat, and of a suitable size to cover the lid or cap of the can, with a recess in the under side, to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover." It also says, "the heated disk or iron is then pushed down in contact with the solder or sealing material, until it is melted, and then turned back and forth until the solder is spread evenly around the edge of the cover."

13th Cross-Inter. Please tell us where that edge is described as bevelled?

Ans. It says here "convex," and I used the word as bevelled.

14th Cross-Inter. Is the word convex used in describing the disk or the lid of the can?

Ans. It describes here the lid of the can.

521 15th Cross-Inter. Suppose that description had been given you, with the drawings attached, and you were told to make an iron with a diameter of one inch and a half, and conform it to the description, would you have made that edge bevelled or flat.

Ans. I would have made it bevelled.

16th Cross-Inter. Why?

Ans. Because the description tells me so.

17th Cross-Inter. Do you mean that it tells you to make it bevelled in those parts of the description which you read, in answer to the 12th cross-interrogatory?

Ans. Yes, sir.

18th Cross-Inter. Is the iron shown in the drawings properly described in the description in Exhibit Rosskamp?

(Objected to as a question for an expert, which the witness does not pretend to be.)

Ans. No, sir.

Re-direct Examination:

First Re-direct Interrogatory. Did Mr. McMurray tell you to make an iron to fit in the crease of the cap or not?

Answer. He did not.

2d Re-direct Inter. Did he tell you to make an iron with a bevelled edge or not?

Ans. No, sir.

Re-Cross-examination by Messrs. BROWN and SMITH:

First Re-cross Interrogatory. Did he tell you to make an iron that could be use for soldering the cap on the top shown in Exhibit Rosskamp No. 1?

Ans. No, sir.

WM. ROSSKAMP.

522 Subscribed and sworn to before me, this 20th day of April, 1880.

ISSAC BROOKS, JR., *Examiner.*

Frank Goode.

FRANK GOODE, a witness produced on behalf of the complainants, after being duly sworn, deposes and says, as follows:

1st Interrogatory. State your name, age, residence, and occupation?

Answer. My name is Frank Goode; I am thirty-two years of age; I reside No. 56 S. Sharp street; I am a clerk for McMurray & Co.

2d Inter. What experience have you had, if any, in soldering caps on cans?

Ans. I have been about packing places off and on for the last ten years, and last year in the peach season of 1879, I had charge of the capping of cans at McMurray & Co.'s factory.

3d Inter. State if you are a practical capper of cans; and, if yea, what irons have you used in capping? (Objected to.)

Ans. No, sir; I have used McMurray's, Barker's, Bostwick's; I have capped with the Barker and Bostwick in the neighborhood of seven or eight hundred cans at different times in the last two or three months, most of which were capped in the fore part of this month.

4th Inter. If you can designate the tools which you have used, and which you call the Barker and Bostwick, please do so.

Ans. I can; they are Burnham-Bostwick and Burnham-Barker; the capping which I have spoken of was done at McMurray &
523 Co.'s factory, and a portion of the capping was done with the Bostwick extension herewith filed, marked Bostwick Extension No. 2.

5th Inter. How many of these cans were capped, respectively, by

which you designate as the Bostwick iron, and how many by the Barker?

Ans. I can't state positively—probably two-thirds by the Bostwick, and one-third by the Barker.

6th Inter. What did these contain which you so capped?

Ans. Oysters, packed in the usual way.

7th Inter. What kind of solder did you use in capping?

Ans. The ring wire, a segment, and the triangle drop solder.

8th Inter. What was the difference in the quality of work done by these irons when using these different shapes of solder?

Ans. I saw no difference.

9th Inter. What was done with the canned oysters after you capped them?

Ans. I directed them to be taken to the process room, and for them to be processed in the usual way, which I saw done myself.

10th Inter. Where are the cans now?

Ans. The most of them are at the factory.

11th Inter. Have you any of them here?

Ans. I have, and I herewith produce them, marked "Goode Cans, Nos. 1, 2, 3, 4, 5, 6, 7, 8."

12th Inter. In using the Barker iron, did you hold down the rod with one hand, whilst turning the iron in capping these cans; and, if not, how did you use the iron?

Ans. I did in capping a greater portion—some I capped by revolving the iron without pressing my hand on the rod.

13th Inter. Those which you capped in this latter way—what difficulty did you have from the displacement of the caps, by reason of the rod bearing upon and running over the top of said cap?

Ans. I had no difficulty whatever.

524 14th Inter. When capping by holding the rod in your hand, how much rotation did you give to the iron?

Ans. I think about a quarter of an inch.

15th Inter. In capping with drop solder and half circles and quarter circles, what amount of rotation did you find to be necessary in the iron?

Ans. I found the least movement was sufficient to distribute the solder, and cap the can perfectly.

16th Inter. What difficulty did you experience from the heat in burning your hand whilst using the iron?

Ans. None, whatever.

17th Inter. Other than those cans which you capped with the Bostwick iron containing the extension, how many of them did you cap with the Bostwick iron with the horizontal or side handle attached and short rod.

Ans. I can't state exactly, but I think about one-third.

18th Inter. What difficulty did you have in obtaining an even pressure whilst capping in that way?

Ans. I had no difficulty.

19th Inter. What difficulty did you have from the heat in burning your hand, whilst holding it with the short rod?

Ans. I had no difficulty.

20th Inter. Did you cap all of these cans with a rod or with a succession of rods, or how did you cap them?

Ans. I capped them sometimes with one rod, and sometives with four or five rods—I capped them in different ways.

21st Inter. How many cans, if you can tell, did you cap by using one rod in succession?

Ans. I can't say positively, but I would cap a tray containing fourteen cans, without changing the rod, I would then take the rod out and put the iron in the fire, and use the same rod on the second tray.

22d Inter. In capping with these Barker and Bostwick irons, did the caps all contain a vent hole in them or not?

Ans. Not all.

525 23d Inter. Can you tell the relative proportion of those that contained a vent hole, and those which did not, whilst capping?

Ans. More than one-half were without any vent holes.

24th Inter. Were they vented after the bath or not?

Ans. They were vented before they were put in the calcium.

25th Inter. Was this before or after they had been in the hot water bath?

Ans. After.

26th Inter. I notice among the cans which you have filed, two of them, Nos. 1 and 3, which do not appear to have any vent hole at all: explain what you know about those cans?

Ans. I took them from among the cans that I capped without a vent; I instructed the processor not to vent them.

27th Inter. Have those cans been processed like the rest or not?

Ans. They have; I saw them processed myself.

Cross-examined by Messrs. BROWN & SMITH:

1st Cross-Interrogatory. Are you a relation of Mr. McMurray's?

Ans. I am by marriage—I am his nephew.

2d Cross-Inter. Have you been present during the taking of the testimony in this case?

Ans. I have, during the greater part.

3d Cross-Inter. Have you ever done any capping, except what you have spoken of in your testimony?

Ans. I have not.

4th Cross-Inter. Has Mr. McMurray's establishment been in operation packing oysters for the last three months?

Ans. We were packing in January; I think we were packing in February—I am not positive—and in the fore part of this month, April.

526 5th Cross-Inter. Have you packed any day this month,

April, except what you packed when experimenting with the irons, about which you have been testifying?

Ans. No. If you mean whilst I was capping with the iron.

6th Cross-Inter. Have you observed in any of the packing houses that you have been connected with, or have visited in Baltimore, whether or not they use cans which have a vent in the cap?

Ans. It is my impression that it was used in all the factories that I observed, except at McMurray & Co's.

7th Cross-Inter. Has it not been universally used in Mr. McMurray's establishment, with the exception of a few cans which have recently been capped, and about which you and other witnesses have testified in this case?

Ans. It has to the best of my knowledge.

8th Cross-Inter. Is it your opinion, based upon the use that you have made of Exhibit Burnham-Barker, that the iron need not be pressed down upon the cap whilst capping?

Ans. I think it is necessary to press the rod down on the cap, when the disk is removed, until the metal hardens, that is what I think the rod is intended for.

9th Cross-Inter. Why need you hold the cap down after being soldered?

Ans. I don't think it would make a good job unless there were some pressure or weight upon the cap, after the disk is removed.

10th Cross-Inter. Why is it necessary to hold the cap down after the solder is melted and the iron is removed until the solder cools?

Ans. I cannot explain it more thoroughly and fully than I have.

11th Cross-Inter. What will disturb the cap?

Ans. Probably the air or something in the can, I don't know, I am not an expert on that point.

12th Cross-Inter. What kind of solder is commonly used in the packing business, as far as you know?

527 Ans. Wire solder, and triangle drop solder, and the bar solder.

13th Cross-Inter. Which is most used?

Ans. It is a hard question for me to answer; I could not state.

14th Cross-Inter. During what time did you use Exhibit Burnham-Barker in capping the cans of which you have testified?

Ans. It might have been an hour or two.

15th Cross-Inter. How often did you heat it during that time?

Ans. I would put it in the fire-pot after I capped each tray.

16th Cross-Inter. How many trays did you cap with it?

Ans. I can't say, exactly; probably ten.

17th Cross-Inter. Did you cap those ten trays as fast as you could heat the iron and cap them up?

Ans. No, sir.

18th Cross-Inter. Did you feel any heat in the wire while using the iron?

Ans. None to interfere in the least with the working.

19th Cross-Inter. In using Burnham-Bostwick did the centre rod get warm?

Ans. Not enough to interfere in the least with the working?

20th Cross-Inter. Did it get warm?

Ans. It was a little warm but not hot.

21st Cross-Inter. How many trays did you cap with the Burnham-Bostwick, using a single rod?

Ans. I can't say, exactly; I can make a guess, probably four or five.

Re-direct examination:

1st Re-direct Interrogatory. In using the Bostwick & Barker iron, without a rod for holding the cap down, do you suppose
528 that the solder adhering to the cap and at the same time to the iron, would cause the cap to be lifted without something like a rod or its equivalent for holding it in place?

Ans. I think it would; I have seen caps lifted by using the iron without the rod.

FRANK GOODE.

Subscribed and sworn to before me, this 20th day of April, 1880.

ISAAC BROOKS, JR., *Examiner.*

May 5th, 1880. Commission met. Mr. Price appearing on behalf of complainants, and Messrs. Brown & Smith on behalf of defendants.

Henry Calvin Weinbrenner.

HENRY CALVIN WEINBRENNER, a witness produced on behalf of the complainants, deposes and says, as follows:

1st Interrogatory. State your name, age, residence, and occupation.

Answer. My name is H. Calvin Weinbrenner; I am thirty-two years of age; I reside at Hanover, Penna.; I am a machinist by trade.

2d Inter. Where did you serve your time, and with whom?

Ans. I served one year at Lewistown, Penna., with Henry Slagle & Bro., and the balance of my time I served in Waynesboro, Franklin Co., Penna., for two years with George Frick; I finished my time with Mr. Frick, May 20th, 1870.

2d Inter. After you had finished your time in May, 1870, where did you go then?

529 Ans. I went to Hanover, and stayed there about six weeks to two months.

4th Inter. At the end of the six weeks or two months, which you stayed in Hanover, where did you go then?

Ans. I came to Baltimore; I came to Kraft & Co., and was employed by them.

5th Inter. In what capacity were you employed by Kraft & Co.?

Ans. I was helping them to put up the piping and kettles.

6th Inter. Had you ever been at work in Baltimore before that time?

Ans. No, sir.

7th Inter. I understand you then to say, that after you left Hanover, in the year 1870, you came to Baltimore to work for Kraft & Co., and that was the first time you had ever had any employment in Baltimore city?

Ans. That is correct.

8th Inter. Who composed the firm of Kraft & Co. at that time, if you know?

Ans. J. J. Kraft and Peter Forney Weinbrenner were the only two. Peter Forney Weinbrenner is my brother.

9th Inter. Is there any other Calvin Weinbrenner that you know of?

Ans. None that I know of.

10th Inter. Did you ever get up a soldering tool for capping cans; and, if yea, where and when?

Ans. Yes, sir; I got one up; it was about six months after I was at work for Kraft & Co., I got it up here in Baltimore; I was then attending to the boilers at Kraft & Co. at that time.

11th Inter. Had you ever gotten up a soldering tool for capping cans anywhere before that time?

Ans. No, sir.

12th Inter. Is your brother, Peter Forney Weinbrenner still a partner of Kraft & Co.?

Ans. He is as far as I know.

530 13th Inter. What kind of a tool was it that you got up at that time; please describe it.

Ans. I had a kind of shaft turned, and I think I had a hole through the centre of it, as near as I can remember now; there was to be a rod then to go through that, with a spring on the inside of it, to adjust itself to the can. The rod was to go in there, and that was to hold the cap down. The arrangement to hold the iron was not made at that time as I wanted it. It was to be made with a slot, and the iron put in then to be adjusted to the cap; but it was made with a set screw, and I had to bend the iron to suit the can I was trying. I only at that time capped two cans.

14th Inter. Did you ever cap any other cans than those two with that machine?

Ans. No, sir.

15th Inter. What care did you take, if any, to keep this machine of yours a secret?

Ans. I took a great deal of care at one time. I did not let anybody see it but my brother and William Fait, in the office; that is, as near as I can remember now. There might have been some one else there, but I can't remember it now.

16th Inter. You say in part of your 13th answer, that "there was to be a rod then to go through that, with a spring on the

inside to adjust itself to the can;" what do you mean by the words "there was to be;" did you actually construct such a rod?

Ans. I had none made at that time, but my idea was to have it made.

17th Inter. Did you ever get a rod made?

Ans. No, sir.

18th Inter. How was the cap held down when you tried it on those two cans?

Ans. I held it down with my hand; I had a stick in my hand at that time, I think.

19th Inter. You also say the tool was to be made with a slot, and the iron put in then to be adjusted to the cap; did you ever get it made with a slot, such as you have described?

531 Ans. No, sir; I never had it made.

20th Inter. I understand you, then, that the tool was not made or finished according to your wishes, having neither a rod nor a slot, such as you desired; did you ever get a tool made at any time with those improvements, which you have just detailed?

Ans. No, sir.

21st Inter. What became of this tool, as it was constructed?

Ans. I put it in the cupboard, under the steps.

22d Inter. What has become of it since?

Ans. I guess it was broken, unless my brother has taken it away.

23d Inter. Did you ever make any inquiry after it, or look it up personally, since that time?

Ans. Yes, I wrote to him about it and asked him whether it was still there yet, and I am positive he wrote that there were some parts of it lost.

24th Int. Who made that tool?

Ans. It was made by Flynn & Emrich.

25th Int. Have you ever seen that tool since?

Ans. I don't remember having seen it.

26th Inter. What was the cupboard under the steps used for, in which you put that tool?

Ans. It was used at the time I was there to keep stocks, dies, and piping in, and loose iron about the place.

27th Inter. Have you ever had any communication with anybody in relation to this iron within the past three or four months; and, if yea, when and with whom?

Ans. My brother wrote to me about Christmas holidays; it was about the first or last of January, 1880; he told me there was to be a law suit, and that I should remember how my iron was constructed. I wrote to him what I knew about the iron, what I could think of it at that time, and that I could not tell him much about it until I saw the model I had made. Then he answered about three weeks afterwards that my idea was not of much account at that time.

532 28th Inter. How long did you remain in Baltimore after you came here in 1870?

Ans. One year, I think.

29th Inter. Are you acquainted with a man named Barney Kegan?

Ans. No, sir; I do not know him.

Cross-examined by Mr. BROWN:

1st Cross-Inter. How long have you now been in Baltimore?

Ans. Since ten o'clock this morning.

2d Cross-Inter. At whose instance did you come to Baltimore?

Ans. Mr. Goode, the gentleman now in the Examiner's office.

3d Cross-Inter. Did he write you, or come for you, or go for you?

Ans. He came for me as far as I know.

4th Cross-Inter. What did he say he wanted you to prove?

Ans. He wanted me to come and state about the soldering iron I had made.

5th Cross-Inter. Did he not want you to prove that you did not make this soldering iron until the latter part of 1870?

Ans. No, he did not particularly want me to prove anything; he wanted me to know the dates and time I came to Baltimore, and at first I did not know. Then we went to Mr. Frick's in the evening, when we quit work, and saw the time I left Waynesboro', the date was May 28th, 1870.

6th Cross-Inter. All you know then as to the time you did come to Baltimore is what you learned from Mr. Frick?

Ans. Yes.

533 *Re-Direct Examination.*

1st Re-direct-Interrogatory. What was it you saw at Mr. Frick's? (Objected to.)

Answer. The time book.

2d Re-direct Inter. What was stated in the time book?

Ans. Nothing more than the last day I worked.

3d Re-direct Inter. How does your own knowledge of the dates correspond with the date in the time book?

Ans. The month I remember very well, but the day of the month I do not remember. I remember the year very well too.

4th Re-direct Inter. I understand you to state that you remember the month to be May in the year 1870, as the time you last worked there, but had forgotten only the day of the month?

Ans. No; I did not think of the year either, until I saw the book.

H. C. WINEBRENNER.

Subscribed and sworn to before me, this 5th day of May, 1880.

ISAAC BROOKS, JR., *Examiner.*

Then adjourned.

May 22d, 1880. Commission met; all counsel present.

William C. Wood.

WILLIAM C. WOOD, a witness produced on behalf of the complainants, after being duly sworn, deposes and says, as follows:

1st Interrogatory. State your name, age, residence, and occupation?

534 Answer. My name is William C. Wood; I am forty-one years of age; I reside in Washington; I am a solicitor of patents.

2d Inter. State, if you please, what is your knowledge of mechanic arts, and patents relating thereto, and what your experience has been therein, and whether you are competent to testify as an expert in patent causes or not.?

Ans. I have been in my present occupation for upwards of fifteen years, during that time I have prepared specifications and made application for a large number of patents, and made many examinations into the state of the art in many connections, and have been frequently called upon to testify as an expert, I have prepared and prosecuted applications for letters patent for inventions in connection with the art of tin-working and can-making, and have testified heretofore in suits involving patents pertaining to can-making machinery. I was formerly engaged in business, parts of which were the manufacture of certain kinds of woolen machinery, the building of water-wheels and mill engineering; I was at one time employed in developing new machinery in connection with the manufacture of textile fabrics; I consider myself comptent to testify as an expert.

3d Inter. Have you read and do you understand the letters patent of the United States, granted to Abel Barker on the 17th day of May, 1870, No. 103,125, and also the re-issue letters patent to said Abel Parker, dated July 1st, 1879, No. 8781?

Ans. I have read and do understand them.

4th Inter. Compare, if you please, said origin patent with the re-issue, and state if you find anything claimed and described in said re-issued patent, which is not shown or described in the original.

Ans. I have compared them carefully and find nothing in said re-issue, either in the drawings, the descriptive matter, or the claims thereof, which is not contained in the original patent of Barker.

5th Inter. I now call your attention to a portion of the testi-
535 mony of Mr. Ellis Spear, on page 183, of the printed testimony, who says, in speaking of the Barker re-issued patent, that he thinks the device is erroneously described in the first and second claims, and that there is nothing in the device or original patent to justify the terms to be rotated about said rod: please examine carefully the 1st and 2d claims of that re-issued patent, compare it

with the original patent, state whether you agree with Mr. Spear or not; and, if not, why not?

Ans. I cannot agree with Mr. Spear in his conclusions on this point; the drawings of the original patent show the rod, marked D, to be located as near the center of the soldering iron A, as the handle C of the iron will permit; I also find in the original specification, the statement that the heated disk or soldering iron A, is "turned back and forth till the solder is spread evenly around the lid," considering the position of the rod D, and the turning back and forth of the disk, or soldering iron, the latter must of necessity rotate more or less around said rod D, although if the rod D were firmly held upon the top of the cap, the rotation of the disk to the extent that it was turned back and forth would not be truly concentric, but slightly eccentric to the rod D; I therefore deem it a correct description of the rod D and the soldering iron to say, as is stated in claims 1st and 2d of the re-issue, that the soldering iron is arranged or adapted "to be rotated" about said rod D.

6th Inter. Look if you please at Exhibit Barker Wooden Handle, state if you find said exhibit to be or not to be made in accordance with the Barker letters patent; point out the difference and resemblances in the exhibit and the patent, and give your reasons for any opinion you may express?

Ans. Complainants' Exhibit Barker Wooden Handle is made in accordance with the specification of Barker, and it contains the several features of invention specified in the five claims of the Barker re-issued patent; I find that in said exhibit wooden handles have been applied respectively to the sliding rod by which the cap of the can is held in place, and to the handle of the soldering iron;

536 such handles are not shown or described in the Barker patent, but in view of the universal use of non-heat conducting material upon handles of tools of all kinds, involving the application of heat, I deem it a right common to Barker as well as the public generally to use such handles in this or in any other connection; I also observe that the soldering face of the iron of this exhibit is bevelled on its outer lower edge, whereas the patent of Barker shows the corresponding face of the soldering iron B to be straight; the soldering iron shown in the Barker patent, is represented in fig. 1, in both the original and re-issue, in proper relation to a cap and a can; the can therein shown appears to have a very shallow crease for the reception of the edge of the cap and solder, and with such a crease, the flat face of the soldering iron B would undoubtedly operate practically and with good results; for use in soldering caps upon cans having a deeper crease than is shown in the patent drawings, a corresponding change would necessarily be made in the shape of the face of the soldering iron and I understand the soldering iron of Exhibit Barker Wooden Handles has been constructed with special reference to this change of condition in the depth of the crease; the patent of Barker describes the soldering iron as being placed upon the solder until it is melted,

and in soldering a cap into a deeper crease, than is shown in the Barker patent, the shape of the iron must necessarily be made to conform with the condition stated, in order to rest upon the solder to melt it as set forth in the Barker patent; in all other respects, this exhibit is in strict accordance with the description and drawings of the Barker patent.

7th Inter. I now call your attention to another part of the description of the Barker Patent, as follows, speaking of the disk: "With the recess B in the under side to give room for the convex lid of the can and to confine the soldering process to the outer edge of the lid or cover;" what operation or effect, if any, do you give to this language, so far as the face of the tool is concerned, as conforming in shape to the cap to be soldered?

537 Ans. The recess B or its equivalent I understand to be an essential feature in the Barker iron for the purpose stated, and that portion of his invention has no relation whatever to the shape of the face of the tool outside of or beyond the recess or its equivalent. In my judgment the shape of the soldering face could be indefinitely varied to suit various conditions of service, without departing from the Barker invention, provided the face practically conformed to the outline of the cap, and was arranged to practically confine the soldering process to the outer edge of the lid or cover. The quotation from the specification recited in the question makes it imperative that the soldering iron be so constructed on its under side as to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover, and in connection therewith the face of the tool must necessarily be so constructed as to be in contact with the solder, whether the crease be deep or shallow.

8th Inter. Now look at Exhibit J. T. Jones No. 2; compare said exhibit with the Barker patent, and state whether, in your opinion, the said exhibit is made in conformity to the specifications and claims therein?

Ans. Exhibit J. T. Jones No. 2 contains all of the parts shown and described in the Barker patent, and these parts are arranged generally with relation to each other, as they are shown to be arranged in said patent. If the sliding rod in this exhibit was made of lighter iron and located somewhat nearer the centre of the disk, it would operate practically if employed in connection with caps of suitable size to enter the recess at the bottom of the iron, if the cap crease was of the shallow character shown in the drawing, Fig. 1, of the Barker patent.

9th Inter. Suppose said Exhibit Jones No. 2 was intended for use upon a can and cap such as are generally used in the trade, and like that represented by Exhibit Rosskamp No. 1, would such tool be constructed in conformity with the description contained in the Barker patent; and give your reasons for your opinion?

Ans. It would not, because the recess in the bottom of the iron is not large enough to receive the cap of Exhibit Rosskamp

538 No. 1, as provided for in the patent, and further, because the diametrical dimensions of the iron do not correspond with the size or circumference of the crease of the can top, Exhibit Rosskamp No. 1, and therefore said iron could not be pushed down in contact with the solder in said crease, as specially provided for in the Barker patent. In view of the depth of the crease in Exhibit Rosskamp No. 1, it would be necessary, as I believe, to bevel slightly the outer lower edge ef the iron of J. T. Jones No. 2 so as to be substantially in that respect like Complainants' Exhibit Barker Wooden Handles, in order that said tool might enter the crease more or less, and engage in melting contact with the solder, as provided for by Barker in his patent.

10th Inter. Mr. Spear further states in his testimony on page 183 of the printed record, "it appears also to me that the soldering iron is not correctly described in the fourth claim of the Barker patent, as 'mounted' upon the movable or side rod. The movable rod is attached to the soldering iron, and its handle as an auxiliary thereto being movable in relation to the iron as the fixed part;" state whether you agree with Mr. Spear or not in this; and, if not, why not?

Ans. I cannot consider the term "mounted" to be erroneously applied in this connection, for it is certain that in the use of this tool, the relation of the rod to the soldering iron is such that the latter is more or less controlled or guided during its several movements while in use; when the rod is placed upon the cap preparatory to soldering, said iron being mounted upon said rod, in sliding downward, is more or less accurately guided to its proper working position; said rod also in a measure controls the rotative movement of the iron, and it also guides the iron during its upward movement away from the solder; the relations of the rod and iron may be described in various ways, but I think the term "mounted," as correctly describes these relations as any other term that could be selected.

11th Inter. Have you read and do you understand letters patent of the United States, granted to Jabez A. Bostwick, on the
539 21st day of June, 1870, for improvement in soldering irons, No. 104,412, and also re-issued letters patent to said Jabez A. Bostwick, dated October 29th, 1878, No. 8466?

Ans. I have read and do understand said letters patent.

12th Inter. Will you compare said re-issue and original letters patent, and state whether you find stated and described in the re-issue any different invention from that described and claimed in the original?

Ans. I have examined said original patent and its re-issue, and I find nothing described or claimed in said re-issue which is not contained in the original patent, although two claims are made in the re-issue and but one claim is made in the original.

13th Inter. Mr. Spear says, on page 183, "referring to the Bostwick patent, I think the first claim erroneously describes the device shown as a central pivotal rod, what is called a central pivotal rod

in the re-issue patent appears to me, both from the original description and from the device shown and described in the patent, to be a weight, adapted to hold the cap of the can to be soldered by its weight, and not to serve as a fixed pivot about which the tool is to be rotated, and by which it is to be steadied and rotated." State whether you agree with Mr. Spear in this view; and if not, why not?

Ans. I do not agree with Mr. Spear in his conclusions on this point, for it appears clear to me that the first claim of the Bostwick re-issue clearly and accurately described that feature of the invention to which the claim relates. In the original patent the rod referred to is described in the original patent and in the re-issue as in "rod" and as a "guiding rod," and it is shown in the drawings to be cylindrical in form. It is described in the original and re-issue as located, when in use, within a cylindrical soldering iron. In the operation of soldering a certain movement of the soldering iron upon the solder is deemed essential for producing a wiping or smoothing effect, and this effect with the soldering iron of Bostwick could only be obtained by revolving the iron upon the solder, and during that movement it would be confined centrally by the rod C, which could not fail to operate as a pivot for the sol-
540 dering iron. It is true that the rod C in Bostwick operates as a weight, as stated by General Spear, but I see nothing in the original or re-issued patent to preclude the placing of the hand upon the top of the weight, to more securely hold it in position, if need be, while operating as a central guiding or pivotal rod during the operation of soldering and while the iron was being revolved.

14th Inter. Have you read and do you understand letters patent of the United States for improvement in soldering tools, granted to John A. Tillery and Samuel Ewalt and filed in this cause, marked respectively Defendants' Exhibit Tillery No. 1, No. 2, and No. 3?

Ans. I have examined the several patents referred to, and understand their contents.

15th Inter. I now quote to you the answer of Mr. Spear to the 8th interrogatory on page 184 of the testimony as follows: "I think the Ewalt and Tillery device patentable, notwithstanding the prior device of Barker and Bostwick, for the reason that it has a central rod by means of which the cap can be held down, whilst the iron is rotated about it, and which, at the same time, serves as a central pivot upon which the soldering iron is turned and guided." Do you agree with Mr. Spear in his views upon this subject; and if not, why not?

Ans. I do not agree with Mr. Spear. The Ewalt and Tillery device does contain a central rod by means of which the cap can be held down, while the iron is rotated about it, and which at the same time serves as a central pivot upon which the soldering iron is turned and guided, as stated by Mr. Spear in his answer referred to. And the device, because of that construction, possesses great practical value. This construction and arrangement of the rod

and iron, however, constitutes no portion of the inventions shown, described, and claimed in either of the letters patent Tillery No. 1, No. 2, and No. 3. The inventions of the patentees, covered by the letters patent referred to, are wholly outside of and independent of the feature of construction and arrangement referred to by Mr. Spear, and they are no doubt improvements to a greater or lesser extent, upon soldering irons pat-
541 ented prior to the earliest date borne by either of the letters patent, exhibits Tillery Nos. 1, 2, and 3. The Ewalt and Tillery device is certainly not patentable to them on account of its having "a central rod by means of which the cap can be held down while the iron is rotated about it, and which at the same time serves as a central pivot upon which the soldering iron is turned and guided," because that feature of construction and arrangement is clearly anticipated in the prior patents of Barker and Bostwick. The Barker Patent has a rod, by means of which the cap can be held down while the soldering iron is rotated more or less, and the Bostwick Patent contains a central rod, by means of which the cap can be held down while the iron is rotated about it, and which at the same time serves as a central pivot upon which the soldering iron is turned and guided.

16th Inter. What experience have you had in dealing with the Patent Office at Washington, in relation to examinations of matters contained in said Department?

Ans. During the past fifteen years I have had frequent occasion to visit the office for the purpose of making examinations of such matters as are open to public inspection.

17th Inter. In making such examinations, are forfeited applications for patents among the things that are open for public inspection; and if not, how are they kept? (Objected to.)

Ans. They are not,—they are kept in the secret archives of the office.

Cross-Examined by Messrs. BROWN & SMITH.

1st Cross-Interrogatory. In what suits involving patents pertaining to can-making machinery have you heretofore testified?

Answer. The suit of Covell *vs.* Charles Pratt & Co., and others whose names I do not now recall, in the circuit court of the United States for the southern district of New York.

WM. C. WOOD.

542 Subscribed and sworn to before me, this 22d day of May, 1880.

ISAAC BROOKS, JR., *Examiner.*

Then adjourned.

June 8th, 1880. Commission met; present, Mr. Price, representing complainants.

William H. Emrich.

WILLIAM H. EMRICH, a witness produced on behalf of complainants, after being duly sworn, deposes and says, as follows:

1st Interrogatory. State your name, age, residence, and occupation.

Answer. My name is William H. Emrich; I am thirty-four years of age; I reside 339 E. Chase st.; I am bookkeeper for the firm of Flynn & Emrich; I have been bookkeeper for sixteen years.

2d Inter. Have you the books of Flynn & Emrich with you; and, if yea, what period of time do those books cover?

Ans. I have. The ledger runs from February 1st, 1867, to February 1st, 1872. The time book, which is the book of original entry, runs from November 17th, 1870, to March 4th, 1871. The day book runs from August 1st, 1869, to July 1st, 1871. I have also another book—the blotter, I call it. It commences June 1st, 1870, and ends 28th January, 1873.

3d Inter. Do the names of Kraft & Co. or of Weinbrenner appear upon your books, and do those books show any work done for those parties; and, if yea, state what was the nature of the work, when it was done, and for whom?

Ans. Those names appear upon our books. Our books show work done for those parties. The first charge on the time
543 book is on page 212, under date of January 30th, 1871. I herewith hand the Examiner the book, that he may transcribe the entry therein, as follows:

Baltimore, January 30th, 1871.
Lang 2½. J. G. Kraft & Co.
Soldering machine.

There is another entry on page 220 of same book, under date of February 1st, 1871, as follows:

Kraft & Co.
Lang 2. Soldering machine.

Another on page 248, under date February 10th, 1871, as follows:

J. G. Kraft & Co.
McCadden 5. Soldering machine.

Also another on page 250, February 10th, 1871.

J. G. Kraft & Co.
Volk & H. ½. Forging for seaming machine, 1¼ lbs.

Also another page 253, February 11th, 1871.

J. G. Kraft & Co.
McCadden 10. Soldering machine.

Also page 257, February 13th, 1871.

Kraft & Co.
McCadden 1½. Soldering machine.

4th Inter. I notice in the margin the names of Lang, Volk, McCadden, with certain figures attached; what do these names and figures mean?

544 Ans. They mean the names of the men who did the work, and the figures mean the number of hours they were engaged.

5th Inter. Do all these entries relate to one and the same machine, or do they relate to different machines or tools upon which these men were at work?

Ans. They relate to the one machine.

6th Inter. To what book were these entries next transferred?

Ans. To the blotter, and were charged up under the date of February 11th, 1871; they were then taken to the day-book, on page 551, under date of February 11th, 1871; from the day book the account was taken to the ledger, on page 371, under date of February 11th, 1871, and continued in the same ledger on page 571. It was transferred to F. M. Weinbrenner, under date of February 11th, 1872. On April 11th, 1872, it was again transferred to J. G. Kraft & Co., and finally paid on said last date by Kraft & Co.

7th Inter. Who made these entries in these books under these respective heads?

Ans. I and James E. Flynn.

8th Inter. Have you taken a transcript of these entries as they occur in the different books; and, if yea, will you file the same with the Examiner?

Ans. I have, and I herewith file the same, marked Complainants' Exhibit Wm. H. Emrich.

9th Inter. Have you examined the books of said firm of Flynn & Emrich, prior to the dates to which you have just testified, for the purpose of seeing if any other soldering iron or capping tool was made by said firm for any party by the name of Kraft or Weinbrenner; and, if yea, how far back did you examine?

Ans. I have, and I went as far back as May, 1867; I found no charge whatever.

10th Inter. Have you examined the books since said date for the same purpose, and how far did you examine them?

Ans. I have; I examined them up to 1873; I found no charges.

545 11th Inter. I understand you, then, that the soldering tool or capping iron, charged in those books, as you have just testified, is the only one made by Flynn & Emrich for any party, either by the names of Kraft or Weinbrenner, charged in those books within the dates which you have given; am I correct?

Ans. You are correct.

WM H. EMRICH.

Subscribed and sworn to before, this 8th day of June, 1880.
ISAAC BROOKS, JR., *Examiner.*

No cross-examination.

Then adjourned.

546 United States Circuit Court, District of Maryland. In Equity.

LOUIS MCMURRAY, EDWARD M. LANG, and GEORGE BURNHAM, JR., trading as MCMURRAY, LANG & BURNHAM,
vs.
DWIGHT D. MALLORY and JESSE C. LUDDINGTON, trading as D. D. MALLORY & CO.

I, Isaac Brooks, Jr., examiner of the circuit court of the United States for the district aforesaid, do hereby certify that on the 23d day of December, 1879, and adjournments therefrom, I was attended by the solicitor for the complainants, Mr. Price, and by Messrs. Brown & Smith, solicitors for defendants, and by the witnesses, and that each witness was by me duly sworn, and the testimony by him given was by me reduced to writing, and thereafter subscribed by the said witnesses in my presence, and I do further certify that I am not of counsel or attorney to either party, nor in any way interested in the event of the cause named in the caption.

ISAAC BROOKS, JR., *Examiner.*

547 In the United States Circuit court for the District of Maryland.

MCMURRAY, LANG AND BURNHAM
vs.
D. D. MALLORY & CO.

To Messrs. Brown & Smith, solicitors for complainants.

You are hereby notified that we will proceed to take the testimony *de bene esse* of David A. Burr, Azell S. Lyman, F. H. Parker, William H. Cohen, and John Romain, of New York city, on behalf of complainants in the above entitled cause, before Edward L. Owen, a United States commissioner, at his office, No. 71 Wall street, in said city, on Friday, the 30th day of April, 1880, at 10 o'clock A. M., continuing from day to day, until the same is completed; the cause of taking the testimony of these witnesses as aforesaid is that they live more than one hundred miles from the place where said case will be tried.

BENJ. PRICE,
Solicitor for Complainants.

Service admitted this 26th day of April, 1880.
SEBASTIAN BROWN,
For Respondents.

548 Circuit Court of the United States for the District of Maryland.

McMURRAY, LANG and BURNHAM *vs.* D. D. MALLORY & Co.

Testimony on behalf of the Complainants, pursuant to the Notice hereto Annexed.

Mr. Benjamin Price appears for the complainants.
Mr. Robert H. Smith appears for the respondents.

SOUTHERN DISTRICT OF NEW YORK, *ss:*

Mr. F. H. Parker, a witness produced on behalf of the complainplainants, being duly sworn, deposes and says, as follows:

My name is F. H. Parker, of the firm of Watts, Parker & Co., in the city of New York; my residence is in the city of New York; I am a merchant; I am of legal age.

1 Q. Mr. J. A. Bostwick has heretofore testified in this cause that sometime since you showed him a soldering tool at his office; be good enough to state if that is true, and where said tool is now, if you know.

A. That is correct; the tool I presume is at my office now; it was a day or two ago.

2 Q. For what purpose was that tool intended?

549 A. As I am not the inventor I prefer to leave that to Mr. A. S. Lyman, the inventor, to answer that question. I am only the temporary custodian of the tool.

3 Q. Do you object to produce that tool?

A. I do, without Mr. Lyman's authority.

Cross-examined by Mr. ROBERT H. SMITH:

1 X-Q. Are you acquainted with Messrs. D. D. Mallory & Co., of Baltimore, the respondents in this case?

A. I am not personally.

2 X-Q. Have you had any communication of any kind with them or any one representing them as to the matter of which you have just testified?

A. I have not.

F. H. PARKER.

Sworn to before me, this 30th day of April, 1880.

EDWARD L. OWEN,
U. S. Commissioner for the Southern District of New York.

William H. Cohen, a witness on behalf of the complainants, being duly sworn, deposes and says:

My name is William H. Cohen; I am of lawful age; I am a member of the firm of William H. Cohen & Co., of the city of New York; I reside at 530 Seventh avenue, in this city. The business of the firm of William H. Cohen & Co., of this city, is that of manufacturers and packers of canned fruits and vegetables.

1 Q. Do you use in your business a soldering tool for capping your cans; and if yea, what kind of a tool is it that you use?

A. Yes, sir; we use several tools. I herewith hand to the
550 commissioner and file it as "Complainants' Exhibit Cohen," as one of the tools which we have used for the past six years. (Respondents' counsel objects to the exhibit and to the filing of the same.)

2 Q. State, if you know, how this tool works in capping cans? (Objected to.)

A. It works very satisfactorily indeed, sir; we can do as much and more work with a boy after very little practice than we used to do with a mechanic with the old-fashioned tool or capper.

Cross-examined by Mr. SMITH:

1 X-Q. Where did you get this iron?

A. I bought it of Mr. Lang, of Portland, Maine.

2 X-Q. How many did you buy of him?

A. I don't remember exactly, but all of twelve.

3 X-Q. How recently has this iron been used?

A. In our last fall's work.

4 X-Q. Has the rod in this iron been used as you now find it?

A. Yes, sir.

5 X-Q. You say that the iron was used, of your knowledge, in its present shape?

A. Yes, sir.

6 X-Q. Please state how the wooden handle came to be burned.

A. I could not tell exactly how this one came to be burned, but we burn them all by having them too near the charcoal fire—by putting them in the fire.

7 X-Q. Has not the wooden handle been reversed?

A. Yes, sir; we often do that during the season while we are at work.

8 X-Q. Do you use any other soldering tool for capping than those like Exhibit Cohen?

A. Not as a general thing; once in a while we use an old-fashioned copper.

551 9 X-Q. In your experience, who can cap the most cans, the boy with "Exhibit Cohen," or the man with the old iron, during the same time?

A. The boy with the exhibit.

10 X-Q. How many in a day more?

A. I could not answer that exactly, but I should say five hundred more in the day.

WILLIAM H. COHEN.

Sworn to before me, this 30th day of April, 1880.

EDWARD L. OWEN,
U. S. Commissioner for the Southern District of New York.

John Romain, a witness produced on behalf of the complainants, being duly affirmed, deposes and says, as follows:

My name is John Romain; I reside in Jersey city, N. J.; am doing business in New York city, at No. 102 Warren street; my business is that of canned goods. I also have a factory in which I manufacture and put up hermetically sealed goods in cans; my factory is at Long Island city.

1 Q. State, if you know, what kind of soldering iron or tool is used at your factory for capping cans, and describe said iron as well as you can?

A. I use the Lang iron; it is a round iron, the same as this I see before me, (witness points to the "Exhibit Cohen.")

2 Q. How long have you used irons like that in capping your cans?

A. Four or five years.

3 Q. How do they work?

A. They work to my entire satisfaction; I prefer them to any other capping iron I have ever seen.

4 Q. What other kinds have you seen?

552 A. I have seen a number of kinds, but I don't remember the names of them. I have seen the Baltimore irons.

5 Q. How were the Baltimore irons made?

A. The part that done the soldering was made of copper, and the other part of it was iron.

6 Q. What was the shape of the part that did the soldering?

A. It was about one-third of a circle in shape; of course it differed in size to suit the size of the cap.

7 Q. How did these irons work, compared with the circular irons which you have in use at your factory?

A. It would depend entirely on the parties who used them. The Lang iron could be worked very easily by a greenhorn, the others would require skilled workmen, one that understood using them.

8 Q. How many cans have you capped with the circular irons, such as you have used in your factory?

A. I will approximate it as nearly as possible—a million and upwards.

Cross-examined by Mr. SMITH:

1 X-Q. Do you use any other iron than the Lang iron?

A. No, sir.

2 X-Q. Where did you see the Baltimore irons used?

A. In New York and Baltimore. In New York I have seen them used by W. W. Stout; I don't know of any other in New York. In Baltimore I have seen them used by H. F. Hemingway & Co., and have also seen them used by some of the oyster packers in Baltimore, I don't know their names.

3 X-Q. How do you know that the Lang iron can be worked by a greenhorn, and the others require a skilled workman?

A. Because I have worked them both; a blind man can almost work a Lang iron.

4 X-Q. What skill is required in working the others, as you call them?

553 Ans. If you will give me the name of the iron I could speak more definitely. The one that I have reference to it has been represented to me to be a patent iron gotten up in Baltimore. They tried to sell me the iron, and that was the representation they made to me.

5 X-Q. What skill is required in working this patent iron gotten up in Baltimore?

Ans. It requires skill to forge them in the first place; then it has to be held perpendicularly and to be turned in a circle.

6 X-Q. How many irons did you try—the patent irons you have testified about?

Ans. One, sir.

7 X-Q. Where and when?

A. I think I tried it in Mr. Stout's shop about four years ago; that was in Greenwich street; I don't know the number; I also tried it in Baltimore, in an oyster house there.

Re-direct:

1 Q. Did you ever hear of an iron by the name of the Ewalt & Tillery? (Objected to.)

A. I think that is the name of the iron I have been testifying about. I have heard of an iron by that name.

JOHN ROMAIN.

Sworn to before me, April 30, 1880.

EDWARD L. OWEN,
U. S. Commissioner for the Southern District of New York

Mr. DAVID A. BURR, a witness produced, sworn, and examined on the part of the complainants, deposes and says:

My name is David A. Burr; my age is forty-two; my residence, Montclair, New Jersey; my occupation, attorney-at-law and solicitor of patents.

554 1 Q. Are you the same David A. Burr referred to by Mr. Bostwick, in his testimony as having negotiated a sale of the Bostwick Patent Soldering Iron for him with Mr. Lang, of Portland, Maine.

A. I am.

2 Q. State, if you please, the price at which the patent was sold to Mr. Lang, the circumstances attending such sale to the best of your recollection. (Objected to, as not in rebuttal.)

A. The patent was sold to Mr. Lang for the sum of five hundred dollars. Mr. Bostwick retained me to prosecute all parties found infringing his patent upon his improved soldering iron, if, upon applying to them for a settlement, they should refuse so to do, and he

gave me the data in his possession, which would enable me to ascertain such parties. In pursuance of this information I ascertained that the firm of E. M. Lang & Company, of Portland, Maine, among others, were manufacturing and selling a soldering iron in infringement of said patent, I addressed them a letter calling upon them for a settlement in view of this infringement. Before writing this letter to them, Mr. Lang had called upon me, at my office, although I was not in at the time. This call was the resolt of a letter which I had addressed to the firm of Burnham & Morrill, I believe, making inquiries as to the manufacture of Lang's iron. In response to my letter calling for a settlement, Mr. Lang, in company with Mr. Burnham, called upon me and showed me a copy of letters patent, which, he stated, was owned by them, issued to one Barker, sometime prior to the date of Mr. Bostwick's patent. They stated that in view of that patent, I had no ground for requiring an account of them; that this Barker patent fully anticipated the Bostwick patent, and that they were manufacturing under said Barker patent. I acknowledge this matter of the existence of this Barker patent was a surprise to me, but after looking it over in their presence I stated to them it was my conviction that there was ground for the Bostwick patent, and that should the question be tried in the
555 courts I did not think they would find the Barker patent alone a sufficient defence. The matter rested here at that time, they leaving me a copy of the Barker patent, and I stated that I would confer with Mr. Bostwick and communicate with them again on the subject. I did so, and Mr. Bostwick, at my interview with him, placed the whole matter entirely in my hands, leaving it with me to decide what course to pursue. Mr. Lang called again, a week or ten days later, and I offered to sell him the Bostwick patent out and out, arguing that with the two patents in his own hands his title would be perfectly clear to the use of such an iron, and consequently it was to his interest to possess himself of it. The final result of my negotiations with him was the sale to him of the patent for the sum of five hundred dollars.

(Objected to as not in rebuttal, and because the respondents can not be bound by any conversations or transactions which took place between Mr. Lang, Mr. Bostwick, and the witness, outside of the presence and hearing of the respondents.)

3 Q. Look at the letters now shown you marked Complainants' Exhibit David A. Burr, Nos. 1, 2, and 3, and state if you know who wrote them, and what you know about them?

A. These letters were written by myself on the dates indicated, and they are a part of the correspondence which I have referred to in my previous answer.

4 Q. Do you remember to whom Mr. Bostwick referred you to as parties infringing his patent besides Mr. Lang? (Objected to.)

A. He referred me to Messrs. Watts, Parker & Co. I think that is the name of the firm of this city, and gave me the address of a

gentleman in Baltimore, to whom he referred me for the names of parties infringing in that city.

Cross-examined by Mr. SMITH:

1 X-Q. In your opinion the Bostwick iron was a clear infringement on the Barker patent, was it not?

556 A. I considered it an infringement of the Barker Re-issued Patent No. 6846, dated January 11, 1876, although I saw features in the Bostwick iron which were not anticipated in the Barker patent.

2 X-Q. Please describe those features?

A. I found in the Bostwick patent a central rod or guide serving as a pivot, about which the soldering tool or iron might be revolved; I found, second, means provided for a revolution of the iron about its central rod or pivot; I found, third, a central weight serving in and of itself to retain the cap upon the can when the soldering tool is lifted therefrom; there may be other points of difference, but these are those which suggest themselves to me at this moment without studying the matter more closely.

3 X-Q. Did you find none of these features in the Barker patent?

A. I did not.

4 X-Q. Wherein did the Bostwick patent infringe the Barker patent?

A. The first claim of the Barker patent is, "for the purpose of soldering and unsoldering can caps, a disk, circular casting or soldering tool, having a recess in the underside and outside the recess an edge or surface, by means of which edge or surface the solder is melted and applied;" I find in the Bostwick patent a soldering tool having a recess in the underside and outside the recess and edge or surface, by means of which edge or surface the solder is melted and applied; I found furthermore in the Barker patent claims covering the use of a soldering tool having a recess in its underside, and which conforms in shape to the cap to be treated, in combination with a rod whose office is to hold the cap down upon the can in the process of soldering until the cap is secured by the setting of the solder; I find that the Bostwick iron embodies this feature of the invention.

5 X-Q. Did you see one of the irons which Lang was using prior to this sale?

A. I did not; I saw an engraving of it only.

557 6 X-Q. Look at "Exhibit Cohen," and state if that is the iron of which you saw an engraving?

A. It resembles it in many respects.

7 X-Q. Under what patent did he claim to be making and using that iron? (Objected to.)

A. Mr. Lang stated to me that he owned the Barker patent, and that he thought himself sufficiently protected by said patent against any claim on the part of Mr. Bostwick that he was an infringer of his, Bostwick's, patent.

DAVID A. BURR.

Sworn to before me, this 30th day of April, 1880.

EDWARD L. OWEN,
U. S. Commissioner for the Southern District of New York.

AZEL S. LYMAN, a witness produced, sworn and examined on behalf of the complainants, deposes as follows:

1 Q. State your name, age, residence, and occupation?

A. Azel S. Lyman; age is 65 years; residence, No. 212 Second Avenue, N. Y. city; my occupation, experimenting at present.

2 Q. Are you the Azel S. Lyman who made a tool for soldering caps on tin cans; and, if yea, have you that tool with you?

A. I am; I have it with me and here produce it, (which is marked "Complainants' Exhibit Parker.")

3 Q. When did you make Exhibit Parker, and in whose possession has it been since?

A. About two years ago I made it, and it has been at Mr. Parker's office; Mr. Parker is of the firm of Watts, Parker & Co.

558 4 Q. When did you receive this tool from Mr. Parker?

A. Only a few minutes ago. (Counsel for respondents objects to this testimony as not in rebuttal.)

AZEL S. LYMAN.

Sworn to before me, this 30th day of April, 1880.

EDWARD L. OWEN,
U. S. Commissioner for the Southern District of New York.

UNITED STATES OF AMERICA, *Southern District of New York,* } *ss:*

I, Edward L. Owen, the commissioner before whom the foregoing testimony was taken, do hereby certify that I was attended by counsel for the respective parties and the witnesses; that the witnesses were by me first duly sworn to testify the truth, the whole truth, and nothing but the truth, in respect of the matters to be inquired of; that the testimony was by my appointed clerk, by consent of the parties, reduced to writing in presence of the witnesses, and they subscribed the same.

I further certify that I am not of counsel for either of the parties, nor in any way interested in the result of said cause.

In testimony whereof, I have hereunto set my hand and affixed my official seal, this 30th day of April, A. D. 1880.

[SEAL.] EDWARD L. OWEN,
U. S. Commissioner for the Southern District of New York.

559 *Opinion.—Filed February 2d*, 1881.

In the U. S. Circuit Court for Md. In Equity.

McMURRAY, LANG & BURNHAM
vs.
D. D. MALLORY & Co.

Infringement of Patent.

This is a bill in equity filed by the complainant for alleged infringement by the defendant of two letters patent for improvement in soldering irons, the title to which the complainants have acquired by assignment.

The first is the "Barker" patent No. 103,125, granted May 17th, 1879, re-issued Jan'y 11, 1876, No. 6846; second re-issue July 1, 1879, No. 8781.

The second is the "Bostwick" patent No. 104,412, granted June 21, 1870, re-issued Oct 29, 1879, No. 8466.

The original Barker patent contains the following description and claim:

"In constructing this machine, I make the disk or casting of sufficient thickness to retain the heat, and of suitable size to cover the lid of the can, with the recess B in the under side, to give room for the convex lid of the can, and to confine the soldering
560 process to the outer edge of the lid or cover."

"To this disk I connect the handle C, of sufficient length to hold when heated. At the side of and parallel with the handle I connect the small rod or wire D with a loop or ring connecting it with the handle at the top and the bottom passing through the disk A, so as to allow it to slide up and down."

He then describes the process of sealing a can by the use of his invention:

"The rod D is pushed down through the disk and placed upon the centre of the cover to hold it. The heated disk is then pushed down in contact with the solder or sealing material till it is melted, then turned back and forth till the solder is spread evenly around the lid. The disk is then to be withdrawn, with the rod D still pressed upon the lid till the solder or sealing material sets or hardens, when the operation is completed.

"What I claim, and desire to secure by letters patent, is: The disk A, with the recess B in the under side, as set forth in combination with the movable rod or wire D, to hold the lid while sealing or closing."

It is conceded that there was nothing new in the annular soldering iron. The claim, therefore, of Barker, in this original
561 patent, was substantially for the rod or wire so combined with the annular or disk-shaped iron as to hold the lid or cap in place during the process of soldering.

The handle by which the disk is operated, is in the drawing

placed in the centre of the disk, and the rod or wire for holding the lid or cap passes through the disk a little to one side of the centre, and at the top is connected with the handle by a loop or ring.

It seems to me that it is apparent that the inventor did not intend that the disk should be revolved about the rod as the axis of its motion. Constructed as shown by the drawing, the rod can firmly hold the lid in its place, and the heated disk can be turned back and forth sufficiently to spread the melted solder, but it is obvious that a completed revolution of the disk was not contemplated or practicable, and even if the hole for the rod had been made in the centre of the disk, and the handle put to one side, an entire revolution of the disk would not have been really practicable without great changes in every particular of the combination claimed.

It appears, that the difficulty which the inventor sought to obviate, was a difficulty arising from the use of a disk-shaped
562 iron; in using a disk which covered the whole lid or cap there was no way of holding the cap down firmly in its place while lifting off the iron, and it was to remedy this difficulty that Barker put a hole through the disk, and a wire through the hole by which the cap could be held down while the iron was being raised, and until the solder hardened; the wire rod did just what the workman using the old straight soldering iron did with his finger or rod of solder.

I think that the invention was the combination of the rod with the annular disk-shaped iron, and that the inventor had no thought of claiming generally the device of a rod which should hold the cap in place while the iron was being removed, as applied to any other form of soldering iron. In his original patent, he claims nothing of the sort, and he gives no intimation that the rod could be applied to a tool of any other shape.

It seems to me that the form in which he made his device is of the essence of the invention, and that he only invented what he described and claimed; that is to say, the movable rod for holding the cap, in combination with an annular or disk-shaped soldering iron.

The " Bostwick " patent was said by the inventor to be an
563 invention for soldering metallic caps and other *projecting* pieces on metallic vessels. He contrived it for use in his business on oil cans, which have a projecting mouth piece somewhat like a pill-box, and which are closed by a cover which fits down over the mouth piece like the cover of a pill-box.

He describes a soldering iron, made of such a shape as to fit over the cap, whether round, square, oval, or of whatever shape the cap might be. The iron is to be made thick, so as to retain the heat; and hollow, so as to fit over and enclose the projection; its inner diameter at its lower end being somewhat greater than the external diameter of the cap. The interior of this hollow iron above the cap is to receive and embrace loosely a guiding rod to be placed on

the cap to be soldered, to hold the latter down firmly until it has been secured by the solder, and at the same time to guide the iron to its proper place upon or against the rim or edge of the cap. This guiding rod also, as well as the iron, is to conform to the shape of the projection and cap. The iron is provided with a handle, which is fastened near its upper edge, and projects in the drawing at right angles to it.

He thus describes the use of the device: "After the iron
564 has been heated it is slipped over the rod, and the rod being then placed upon the cap is held thereon firmly, while the lower rim of the heated iron, duly supplied with solder, bearing upon the joint of the cap with the vessel, will instantly solder and secure the same about its entire circumference.

"By lifting the rod a shoulder engaging with an offset within the iron will take up the iron with it in readiness to be placed upon another cap, and thus a number of caps may be quickly and thoroughly soldered at one heat of the iron."

He claims as his invention "the hollow iron having a handle and beveled rim in combination with the rod, substantially as set forth."

In the drawing the soldering iron is represented about an inch in diameter and about an eighth of an inch in thickness, and the guiding rod fills the remaining space, showing that the inventor intended the rod to be of considerable thickness, sufficient to cover the top of the cap and of sufficient weight to hold the cap firmly in its place.

The complainants contend that this invention covers any device in which there is a central pivotal rod on which a soldering iron may turn, and in which the rod is enclosed in but is separa-
565 ble from the iron. This general application of the invention is not claimed in the original patent, and I am unable to see that it was suggested or indicated in any way by the specifications or drawings. The turning of the iron on the rod as a pivot is no where suggested, and would indeed have been impossible if the rod or iron had been made of any of the shapes suggested by the patentee except circular—as the iron was to surround the projecting mouth-piece and cap they constituted, if circular, a fixed pivot, and the rod as a *pivot* was useless, considering its great proportionate weight and very considerable surface resting on and covering the cap. The only use of this central rod in connection with the *rotating* of the iron would seem to be to prevent the cap from rotating with the iron while the iron was rotating on the projecting mouth-piece and cap as an axis. Altogether the Bostwick tool in shape, operation, and principle appears to me to be different from defendants' tool, and in no manner suggestive of it.

The soldering tool used by defendants is known as the "Tillery Soldering Tool." For our present purpose it may be sufficiently described as consisting of a rod, the point of which is to be
566 placed upon the centre of the cap of the ordinary oyster or

fruit can. Attached to this rod, so as to revolve around it, is an arm much the shape of a carpenter's brace. In place of the bit of a carpenter's brace an ordinary straight soldering iron is to be inserted. The point of this iron in the exhibit is curved so as to represent a very small arc of the circumference of a small circle. When revolved, the arm carries the iron around at such a distance from the pivotal rod which has been placed upon the centre of the cap, that it describes a circle identical with the edge of the cap and the crease in the can made to receive it, and melts and spreads the solder in that crease. The arm is so constructed as to slip up and down on the pivotal rod, so that the workman can keep the rod pressed upon the cap while he raises the iron and allows the solder to harden.

After a careful examination of the models of all these tools, it does not appear to me that either the "Barker" or Bostwick models or descriptions could ever have suggested to any mechanic the construction of the tool which is complained of as an infringement. I rather incline to think that so far as the complainants' devices would have any influence, it would be to lead the
567 mind of a mechanic or an inventor away from the Tillery tool and suggest devices based upon the annular or disk-shaped iron. To take the old-fashioned soldering iron, and instead of shaping its end into a blunt point, to shape it into the arc of a circle for use in soldering a circular crease, could hardly be said to require invention, and such a shaping of it cannot, I think, be made out to be in any fair sense the equivalent of an annular iron, such as is used in either the Barker or the Bostwick patent; nor could either of those patents be operated with a soldering iron of any such shape as the one used in the Tillery tool.

The conclusion to which I have come is that the two patents, on which the complainants base their claims, are for combinations in which the form of the instrument is of the essence of the invention, and that the complainants are entitled only to substantially that form of instrument which, in his specifications and drawings, the patentee under whom they claim has shown.

Werner *v.* King, 6 Otto, 230.
R. R. Co. *v.* Sayles, 7 Otto, 556.

With regard to the validity of the claims of the re-issues of complainants' patents, I do not propose specifically to decide,
568 further than may be necessarily involved in deciding that the present defendants have not been shown to have been guilty of infringement.

If the construction contended for by the complainants is to be put upon these re-issues, it must be said, in view of all the proof, that they savor of a purpose to enlarge the claims to cover improvements not even suggested in the original patents. The "Tillery" tool was contrived and had gone into use long before the re-issues were obtained, and the remarks of Mr. Justice Bradley, delivering the

decision of the Supreme Court in the case of The Swain Turbine Co. *vs.* Ladd, speaking of the expanded claims now so frequently sought after by re-issues, would seem very pertinent to this case (19 Official Gazette 62, Dec. 13, 1880).

But putting upon the claims of the re-issues that restricted construction necessary to bring them within the invention clearly and accurately described in the drawings and specifications of the original patents, I do not find that the defendants, in using the Tillery soldering iron, constructed as shown by the exhibits produced in this case, have been guilty of infringing any of the exclusive rights to which the complainants have become entitled as the assignees of either the Barker or Bostwick inventions.

The complainants' bill must be dismissed.

569 *Decree.*

Filed 2d February, 1881.

In the Circuit Court of the United States for the Fourth Circuit in and for the District of Maryland. In Equity.

LOUIS MCMURRAY, EDWARD M. LANG, GEORGE BURNHAM, JR. *vs.* DWIGHT D. MALLORY, JESSE C. LUDDINGTON.	Bill for an Injunction, &c.

This cause having been submitted for final hearing, and the counsel for the respective parties having been heard, and the bill answer, exhibits, and evidence having been read and considered.

It is this 2d day of February, 1881, adjudged, ordered, and decreed that the bill of complaint filed in this cause, be, and the same is hereby dismissed, with costs to the defendant.

THOS. J. MORRIS.

570 *Appeal.*

From which said decree, so as aforesaid made and passed, the said complainants, by their solicitor aforesaid, on the day of the making and passing of the said decree, to wit, on the 2d day of February, in the year 1881, in open court here, prayed an appeal to the Supreme Court of the United States, to be held at the city of Washington, on the second Monday in October next, and to them it is granted.

In pursuance whereof and according to the form and effect of the statutes in such case made and provided, the record and proceedings in the cause aforesaid, with all things thereunto relating, are hereby transmitted to the said Supreme Court accordingly.

571 *Appeal Bond, Filed 26th March*, 1881.

Know all men by these presents: That we, Louis McMurray and William P. Dawson, are held and firmly bound unto Dwight D. Mallory and Jesse C. Luddington, in the just and full sum of five hundred dollars, current money, to be paid unto the said Dwight D. Mallory and Jesse C. Luddington, their executors, administrators, or assigns, to which payment well and truly to be made and done we bind ourselves, our heirs, executors, and administrators, jointly and severally, firmly by these presents. Sealed with our seals, and dated this 22d day of March, in the year one thousand eight hundred and eighty-one.

Whereas, heretofore, to wit, on the 2d day of September, 1879, the said Louis McMurray and Edward M. Lang and George Burnham, Jr., filed their bill of complaint in the circuit court of the United States for the fourth circuit in and for the district of Maryland, in equity, against the said Dwight D. Mallory and Jesse C. Luddington; and whereas, also, in the said court, on the 2d
572 day of February, in the year 1881, the said court passed its final decree in said cause, dismissing the said bill with costs to the said defendants. From which said decree the said complainants have prayed an appeal to the Supreme Court of the United States, to be held at the city of Washington on the second Monday of October next, and it has been granted them.

Now, the condition of the above obligation is such that if the said Louis McMurray, Edward M. Lang, and George Burnham, Jr., shall prosecute their said appeal with effect, and pay to the said Dwight D. Mallory and Jesse C. Luddington the costs and charges adjudged to them by the said circuit court, and also such costs and charges as may be awarded unto them by the Supreme Court of the United State, in case the said Louis McMurray, Edward M. Lang, and George Burnham, Jr., shall fail to make good their said plea, then the above obligation to be void and of none effect; otherwise, to be and remain in full force and virtue in law.

LOUIS McMURRAY. [SEAL.]
WILLIAM P. DAWSON. [SEAL.]

Signed, sealed, and delivered in presence of:
FRANK GOODE.

573 The foregoing bond is thus endorsed, to wit: "Bond approved March 26th, 1881. Thos. J. Morris."

THE UNITED STATES OF AMERICA, }
District of Maryland, } *to wit:*

I hereby certify that the foregoing is a full and true transcript of the record and proceedings of the circuit court of the United States for the fourth circuit in and for the Maryland district, in the cause aforesaid.

In testimony whereof, I hereto set my hand and affix the seal of the said circuit court, this 28th day of March, A. D. 1881.

[SEAL.]

JAS. W. CHEW,
Clerk of said Circuit Court.

Endorsed on cover: Maryland C. C. U. S. No. 250. Louis McMurray, Edward M. Lang, and George Burnham, junior, appellants, *vs.* Dwight D. Mallory and Jesse C. Luddington. Filed 14th May, 1881.

111-97

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1883.

1 LOUIS MCMURRAY, EDWARD M. LANG & GEORGE BURNHAM, Jr. *vs.* D. D. MALLORY & Co. } No. 250.

To Sebastian Brown, Esq., counsel for appellee:

I hereby notify you that I shall file with the clerk of the Supreme Court, and refer in the argument of the above case before the Court to the "*disclaimer*" attached to the Bostwick patent, of which you have heretofore had full notice.

Very respectfully, &c.,

BENJ'N PRICE,
For Appellants.

Copy of notice admitted to be served this 3d day of March, 1884.

SEBASTIAN BROWN.
Per COALE.

2 Department of the Interior, United States Patent Office.

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the records of this office of the reissue letters patent granted E. M. Lang & Company, October 29, 1878, number 8,466, improvement in soldering irons; also copy of disclaimer filed September 25, 1883, in the matter of the same.

In testimony whereof, I, R. G. Dyrenforth, Acting Commissioner of Patents, have caused the seal of the Patent Office to be affixed, this 26th day of February, in the year of our Lord one thousand eight hundred and eighty-four, and of the Independence of the United States the one hundred and eighth.

[SEAL.] R. G. DYRENFORTH,
Act'g Commissioner.

3 No. 8466, Reissue. (2–155.)

THE UNITED STATES OF AMERICA.

To all to whom these presents shall come:

Whereas Jabez A. Bostwick, of New York, New York, assignor to E. M. Lang & Co., of Portland, Maine, has presented to the Commissioner of Patents a petition praying for the reissue of letters patent for an alleged new and useful improvement in soldering irons, for which letters patent were issued to him, dated June 21, 1870, which letters having been surrendered, the same have been canceled, and new letters ordered to issue to said assignees, on an amended specification, a description of which invention is contained in the specification, of which a copy is hereunto annexed and made

a part hereof, and has complied with the various requirements of law in such cases made and provided; and

Whereas, upon due examination made, the said claimant is adjudged to be justly entitled to a patent under the law;

Now, therefore, these letters patent are to grant unto the said E. M. Lang & Co., their heirs or assigns, for the term of seventeen years from the twenty-first day of June, one thousand eight hundred and seventy, the exclusive right to make, use, and vend the said invention throughout the United States and the Territories thereof.

In testimony whereof I have hereunto set my hand and caused the seal of the Patent Office to be affixed, at the city of Washington, this twenty-ninth day of October, in the year of our Lord one thousand eight hundred and seventy-eight, and of the independence of the United States of America the one hundred and third.

[SEAL.] A. BELL,
Acting Secretary of the Interior.

Countersigned:
W. H. DOOLITTLE,
Acting Commissioner of Patents.

4 Illustration.

5 *United States Patent Office.*

Jabez A. Boswick, of New York, N. Y., Assignor to E. M. Lang & Co., of Portland, Maine.

IMPROVEMENT IN SOLDERING-IRONS.

Specification forming part of Letters Patent No. 104,412, dated June 21, 1870; Reissue No. 8,466, dated October 29, 1878; application filed September 3, 1878.

To all whom it may concern:

Be it known that I, JABEZ A. BOSWICK, of the city, county and State of New York, have invented a new and useful Improvement in Soldering-Irons, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a view in perspective of my improved soldering-iron and of a cap placed upon a metallic can to be soldered. Fig. 2 is an elevation of the guiding or pivotal presser-rod; and Fig. 3 is a sectional view of the soldering-iron, placed upon a cap so as to solder the same, with the pivotal presser-rod in place to hold down the cap and guide the iron in its operation.

My invention relates to the construction of a tool for soldering the caps upon the tops of metallic cans which will admit of more easy and expeditious manipulation in performing the operation than the tools heretofore employed for this purpose.

It consists in the combination of an iron adapted to produce, when heated, a proper flow of solder along the joint of a can-cap, with a central rod about which it may revolve, and which will serve the twofold purpose, first, of a pivot to limit and guide the solder-

ing-iron in its proper movement during the process of soldering; and, second, of a weight to press and hold down the cap during the operation and until it is fixed and retained by the solder.

In the accompanying drawing, A is a soldering-iron consisting of a ring or cylinder of metal made thick to retain heat, and provided with a lower edge or face, *a*, beveled, and adapted to rest upon and follow the joint to be soldered, and to produce a proper flow of solder in and upon the same. This soldering-edge *a* may be continuous and annular to embrace the cap, or it may form merely the arc of a circle, or be otherwise broken away to bear upon the joint at one or two points thereof, instead of continuously. The iron is provided with a handle, B, for removing it from can to can or to and from the furnace, and by means whereof its movement about its central pivot-rod and along the joint to be soldered is effected. This handle is guarded, as usual, with wood or other non-conductor of heat.

C is a rod, made heavy to serve as a weight to retain the cap in place while being soldered. Its upper end is of such diameter as to fit loosely within the upper annular portion or collar of the soldering-iron, and its lower end is enlarged to form a shoulder, *d*, which, when the rod is lifted, shall engage the counterpart projection *e* formed by the collar of the iron A.

In the operation of soldering with this tool, the weight or presser-rod C is placed centrally upon the cap which is to be secured, and the iron B, properly heated, is slipped over the rod, and, being brought thereby to bear upon the joint, is quickly turned or revolved about the rod as a pivot, so as to melt the solder at the joint and flow it to every part of the seam. So soon as this is accomplished the iron is lifted off from the presser-rod C, and either slipped over a second rod placed ready in position upon the next can, or, if necessary, is reheated for the purpose. In the meantime the presser-rod, remaining as a weight upon the can-cap which has been operated upon, will retain it in position until the solder of the joint is set and the cap thereby secured. The process of soldering may thus be very rapidly and effectively carried on without the need of a skilled workman.

The central rod thus serves not only as a guide to conduct the heated iron directly to the joint, but also as a pivot to determine and facilitate its ready movement along the joint, and as a loose weight to hold the cap in place until it is secured by the cooling of the solder.

If the presser-rod C be lifted instead of the soldering-iron proper, the shoulder *d* on the rod, engaging the offset *e* of the collar within the iron, will serve to take up the latter, so that it may be thereby transferred to another can-cap. A number of cans may be in this manner soldered at one heat of the iron with but one presser-rod; but in such case the operator must first, after lifting the iron from the joint, pause a moment to allow the joint to set before lifting the rod itself from the can.

I claim as my invention—

1. A tool for soldering the caps on cans, consisting of a soldering

iron revolving about a central pivotal rod, which is made to rest upon and steady the cap during the operation of soldering

2. The combination of a hollow iron for soldering caps on cans with a separate and inclosed weight for steadying the cap on the can during the operation of soldering.

J. A. BOSTWICK.

Witnesses:
JAS. W. HALL,
DAVID A. BURR.

6 *Disclaimer.*

To the Commissioner of Patents:

SIR: Your petitioners, Louis McMurray, residing at Baltimore, Maryland, Edward M. Lang, and George Burnham, Jr., residing at Portland, Maine, citizens of the United States, and trading as McMurray, Lang & Burnham, represent that in the matter of a certain improvement in soldering-irons, for which letters patent of the United States, No. 104,412, were granted to Jabez A. Bostwick, on the 21st day of June, 1870, and were afterwards assigned and reissued to E. M. Lang & Co., of Portland, Maine, which said reissued letters patent were granted to the said E. M. Lang & Co., on the 29th day of October, 1878, and are numbered 8,466. They are owners of the entire right, title, and interest in and to said reissued letters patent, and have received the same by assignment from said E. M. Lang & Co., to whom said reissued letters patent were granted, which said assignment bears date the 14th day of August, 1879, and is recorded in the Patent Office of the United States, in Liber 24, page 162, of the Transfer of Patents; and that they have reason

7 to believe that, through inadvertence, accident, or mistake, the specification and claims of said reissued letters patent were expanded and made too broad, including that of which the patentee was not the first and original inventor or discoverer.

Your petitioners do not choose to claim or hold by virtue of said reissued patent and assignment any part of said patented improvement which is not truly and justly the invention of said Jabez A. Bostwick, and described and claimed in his original patent.

Your petitioners therefore hereby enter their disclaimer to all parts of the thing patented, which are or may be construed to be broader or more comprehensive than the invention, as described, shown, and claimed in the original patent issued to the said Jabez A. Bostwick on the 21st day of June, 1870, and numbered 104,412.

They hereby disclaim all words, phrases, and sentences introduced in the specification which may mean or may be construed to contain any other or different invention than that justly belonging to the inventor, and fairly included in the invention, as originally described and claimed.

They disclaim all meaning of construction of the first

8 claim, except such as are therein mentioned, when construed to mean a hollow soldering-iron, having a handle B, and beveled rim *a*, *a*, fully described and set forth in the specification

and claim of the original patent, and operating substantially as therein described.

They further disclaim all meaning or construction of the second claim of said reissued patent, except when the hollow soldering-iron therein mentioned is constructed with the beveled rim *a*, *a*, and is provided with the handle B, as set forth in the specification and claim of the original patent, and operating substantially as therein described, and desire that said reissued patent, when the disclaimed matter is cancelled, will read as follows:

I, Jabez A. Bostwick, of the city, county, and State of New York, have invented a new and useful soldering-iron for soldering metallic caps, or other projecting pieces on metallic vessels, of which the following is a specification:

My invention relates to the construction and use of a hollow soldering-iron for soldering metallic caps, or other projecting pieces, upon metallic oil-cans or other vessels, said iron, when made with an inclosing edge of the dimensions and form of the rim or edge of the cap or piece to be soldered, so as to conform thereto when placed thereon, and so extended and formed interiorly as to receive and embrace loosely a guiding-rod to be placed upon the cap to be soldered, to hold the latter down firmly until it has been secured by the solder, and at the same time guide the iron to its proper place upon or against the rim or edge of the cap.

Figure 1 is a view in perspective of my improved soldering-iron, and of a cap placed upon a metallic can to be soldered.

Figure 2 is an elevation of the guiding rod.

Figure 3 is a sectional view of the soldering-iron placed upon the cap, so as to solder the same with its guiding-iron in place to hold it down and guide the iron in its operation.

A is my improved soldering-iron, made of a cylindrical form to solder circular caps, &c.

It consists of a cylinder of metal made thick to retain heat, and hollow to fit over and inclose the projection of the metallic cap to be soldered thereby, its inner diameter at its lower end being somewhat greater than the external diameter of said cap.

It is provided with a handle, B, secured thereto near its upper end, guarded as usual with wood or other non-conductor of heat.

Its lower rim, *a*, *a*, is beveled so as to present a narrow edge to hold the solder in applying the same to the joint.

The inner diameter of its upper end is made smaller than that of its lower end, so as to form a shoulder, *e*, therein about midway of its length.

C is a rod whose lower end is of a diameter about equal to that of the cap or projection to be soldered, but which is reduced in diameter above the same, so as to form a projecting offset or shoulder, *d*, a counterpart of that (*e*) within the soldering-iron.

After the iron has been properly heated it is slipped over this rod, and the rod, being then placed upon the cap, is held thereon firmly while the lower rim of the heated iron, duly supplied with

solder, bearing upon the joint of the cap with the vessel, will instantly solder and secure the same about its entire circumference.

By lifting the rod its shoulder engaging with the offset within the iron will take up the latter with it in readiness to be placed upon another cap, and thus a number of caps may be quickly and thoroughly soldered at one heat of the iron.

I contemplate making the soldering-iron A and its guiding-rod C of any form in transverse section which may be required
11 to cause it to fit upon any form of cap, or any other curved or polygonal shape; its lower rim or edge need not be made continuous, but may be broken or slotted.

I claim as my invention—

The hollow soldering-iron A, having a handle, B, and beveled rim, *a*, *a*, in combination with the rod C, substantially as herein described and set forth.

J. A. BOSTWICK.

Witnesses:
JAS. W. HALL.
DAVID A. BURR.

In testimony that we make the above disclaimer, we hereunto set our hands, this 24th day of September, 1883.

McMURRAY, LANG & BURNHAM. [SEAL.]
LOUIS McMURRAY. [SEAL.]

Witnesses to signatures of McMurray, Lang & Burnham and Louis McMurray:
JOHN E. SEMMES.
BENJN PRICE.

EDWARD M. LANG. [SEAL.]

Witness to the signature of Edward M. Lang:
G. E. BIRD.

GEORGE BURNHAM, JR. [SEAL.]

Witness to the signature of George Burnham, Jr.:
GEORGE J. DAMERY.

Examined: H. M. H., E. A. M.

Supreme Court of the United States.

No. 250.

...

McMURRAY, LANG & BURNHAM

vs.

D. D. MALLORY & CO.

...

Appeal from the Circuit Court of the United States, for the Fourth Circuit, Sitting for the District of Maryland.

...

BENJ. PRICE,
For Appellants.

Supreme Court of the United Sattes.

No. 250.

McMURRAY, LANG & BURNHAM

vs.

D. D. MALLORY & CO.

Appeal from the Circuit Court of the United States, for the Fourth Circuit, in and for the District of Maryland.

ABSTRACT OF THE CASE.

In this case a Bill of Complaint was filed in the Circuit Court of the United States, on the 26th day of August, 1879, by Louis McMurray, Edward M. Lang, and George Burnham, Jr., trading as McMurray, Lang & Burnham, against Dwight D. Mallory and Jesse C. Luddington, the Defendants, trading as D. D. Mallory & Co.

The Bill alleges that, Letters Patent of the United States were granted to Abel Barker, of Wyoming, Pennsylvania, for an "Improvement in Soldering devices," on the 17th day of May, 1870, No. 103,125.

That this patent was re-issued to said Abel Barker and Edward M. Lang, on the 11th day of January, 1876, and said re-issued patent was numbered 6,846.

That this patent was again re-issued to Edward M. Lang, assignee of Abel Barker, on the 1st day of July, 1879, and said re-issued patent is numbered 8,781.

That the Appellants are in exclusive possession of all rights, title and interest in the said Letters Patent and invention, and are the exclusive owners thereof.

(Copies of these Letters Patent are in evidence as well as models illustrating the invention.)

That Letters Patent of the United States were granted to Jabez A. Bostwick, of New York, on the 21st day of June, 1870, for an "Improvement in Soldering Irons," and were numbered 104,412.

That these Letters Patent were, on the 29th day of October, 1878, re-issued to Edward M. Lang & Co., and are numbered 8,466.

That Complainants are the exclusive owners of these Letters Patent.

It is proper to state here that the Complainants have entered and filed in the Patent Office a disclaimer, on the 24th day of September, 1883, disclaiming all parts of the thing patented not described and claimed in the original patent, and claiming to hold only such as were shown, described and claimed in said original Letters Patent. This disclaimer was not filed at the date the case was tried below, and is mentioned here as a part of the case to which Appellants will refer in the argument.

The Bill further alleges the compliance with the laws and Statutes of the United States in obtaining the Letters Patent, that said patented inventions were put into practical use, and charges the Defendants with infringement of The Re-issued Barker Patent, No. 8,781, and The Re-issued Bostwick Patent, No. 8,466.

Copies of the several Letters Patent and models illustrating the invention are filed in evidence in the cause.

The prayer of the bill is for an injunction to restrain the Appellees from violation of Appellants' rights, for an account of profits, damages, subpœna, and further relief.

The answer filed on the 3rd day of December, 1879, denies that Abel Barker was the original and true inventor of the improvement, shown and described in his Letters Patent, denies also that they were ever surrendered according to law; denies also that Jabez A. Bostwick was the first and original inventor of the improvement in his said Letters Patent, and that said Letters Patent were ever surrendered according to law, and alleges that the re-issued Barker and Bostwick were not for the same invention as that described in their original patents—the answer puts the Complainants to the proof of their title, and denies infringement. It further alleges that the Defendants are using in their business "what is known as the Tillery Soldering Iron."

To establish that Barker and Bostwick were not the first and original inventors of their improvements, they give notice of the following United States patents:

James L. Gray, of Baltimore, Patent No. 63,504, and

Wm. D. Bishop, of New York, Patent No. 10,957, the dates of these patents are not given in the answer.

In the notice given in the answer as to prior use, the following names are given—

"John A. Tillery, John L. Fritz, John O'Brian and wife, Randolph R. Delaney, Henry French, Mr. Lowman, and Jesse C. Luddington—the language of the answer, in citing the above witnesses is—"to prove that they had knowledge of the prior use in Baltimore City, of a machine constructed in accordance with *the invention of the said John A. Tillery, and said Letters Patent granted said Tillery & Ewalt.*"

A replication was duly filed and issue joined. An examiner was duly appointed by the Court to examine the witnesses produced, the testimony was returned, and the case argued before the Court, upon which his Honor, Judge Morris, rendered the decision, to be found in the record, at *p.* 334.

The two patents of Barker and Bostwick pertain to implements for soldering the caps on tin cans.

The first, the Barker, Patent was granted May 17th, 1870, on p. 29 of the record the specification of this patent begins,

and the drawing is inserted in the record opposite p. 30. The tool consists in the main of but two parts, viz: a soldering iron and a rod; after the description of the manner in which the tool is constructed, and the mode of opening the can, the specification proceeds with the mode of closing or sealing the can in the following words:

"*The cover is then carefully laid in place on the can, and new solder or material placed around the lid if necessary, the rod D is then pushed down through the disk, and placed upon the centre of the cover to hold it. The heated disk is then to be pushed down in contact with the solder or sealing material till it is melted, then turned back and forth till the solder is spread evenly around the lid. The disk is then to be withdrawn, with the rod D, still pressed upon the lid, till the solder or sealing material sets or hardens, when the operation is completed.*"

The claim is as follows:

"*The disk A, with the recess B in the under side, as set forth, in combination with the movable rod or wire D, to hold the lid while resealing or closing.*"

This patent was re-issued on the 11th day of January, 1876, and again on the 1st of July, 1879, this last re-issue is the one upon which the suit is brought, and is numbered 8,781, it is filed in the case as *Complainants' Exhibit, Barker Re-issue No. 2.*

The original Bostwick Patent is also for a soldering tool or implement of the same class as that of the Barker, but having special features of construction as described in the specification, beginning on p. 36, of the record, and referring to the drawings which illustrate the invention inserted in the record opposite p. 37, the claim is as follows:

"*The hollow soldering iron A, having a handle B, and bevelled rim a, a, in combination with the rod C, substantially as herein described and set forth.*"

This patent was also re-issued on the 29th day of October, 1878; this re-issue is the one upon which the suit is brought,

and is filed in the cause as Complainants' Exhibit, "Bostwick Re-issue."

The specification begins on p. 39, of the record, and the drawings are inserted opposite same page.

Assignment of Errors.

1. The opinion of the Court below in the description of the Barker Patent down to the end of the claim therein quoted from the original patent is correctly and clearly stated and no error will be assigned to this portion of the decision.

2. The learned Judge erred in the following matter of opinion on the Barker Patent, "*even if the hole for the rod had been made in the centre of the disk, and the handle put to one side, an entire revolution of the disk would not have been really practicable without great changes in every particular of the combination claimed.*"

3. The Court below erred in the following matter of opinion upon the Barker invention.

"*It appears that the difficulty which the inventor sought to obviate, was a difficulty arising from the use of a disk-shaped iron.*"

4. The learned Judge erred in the following expression of opinion upon the Barker invention.

"*I think that the invention was the combination of the rod with the annular disk-shaped iron, and that the inventor had no thought of claiming generally the device of a rod which should hold the cap in place, while the iron was being removed, as applied to any other form of soldering iron. In his original patent, he claims nothing of the sort and he gives no intimation that the rod could be applied to a tool of any other shape.*"

5. The learned Judge below erred in assuming that a half-round iron was not in reality a round iron; and that a

semi-circular iron with a semi-circular recess, was not the same thing, mechanically, as a circular iron with a circular recess.

6. The learned Judge below erred in the following matter of opinion on the Barker Patent.

"*It seems to me that the form in which he made his device is of the essence of the invention and that he only invented what he described and claimed, that is to say, the movable rod for holding the cap with an annular or disk-shaped soldering iron.*"

7. Under the supposition that the form of the device is the essence of the Barker invention, the Court below erred in not considering the form of the *whole* device, and in confining his opinion to the form of only one of the elements in the combination of devices claimed.

8. The Court below erred in construing the word "*rotate*" to mean a continuous revolution. The meaning of that word in the sense used in the patent, is a "*turning back and forth.*"

9. The Court below erred in assuming that defendant's soldering iron which contains all the elements of the Barker combination and operates in soldering by turning the iron *back and forth*, sufficiently to solder the parts, was not an infringement of the Barker Patent, because it had the additional capacity of turning around in continuous revolution.

10. The learned Judge below erred in his construction of the Bostwick Patent, in assuming that the Bostwick apparatus was limited in its operation to be used upon metallic vessels having *projecting pieces* or projections in shape "somewhat *like a pill box.*"

11. The Court below erred in construing the piece to be soldered, to be a part of the Bostwick Patent. Whilst the

inventor describes and shows such projecting piece, in order to explain his invention, he describes and claims the soldering implement, and not the thing to be soldered, as his invention.

12. The learned Judge below, erred in restricting the use of the Bostwick invention to projections of the above class, and in not allowing the use of the invention whenever it was capable of working.

11. The Court below erred in the following expression of opinion on the Bostwick Patent:

"*In the drawing, the soldering iron is represented about an inch in diameter, and about an eighth of an inch in thickness, and the guiding rod fills the remaining space, showing that the inventor intended the rod to be of considerable thickness, sufficient to cover the top of the cap, and of sufficient weight to hold the cap firmly in place.*"

14. The Court below erred in the following expression of opinion on the Bostwick invention:

"*The Complainants contend that the invention covers any device in which there is a central pivotal rod on which a soldering iron may turn, and in which the rod is enclosed, but is separable from the iron.*

"*This general application of the invention is not claimed in the original patent, and I am unable to see that it was suggested or indicated in any way by the specifications or drawings.*"

15. The Court below erred in the following expression of opinion on the Bostwick invention:

"*The turning of the iron on the rod as a pivot is nowhere suggested, and indeed would have been impossible if the rod or iron had been made of any of the shapes suggested by the patentee, except circular,—as the iron surrounded the pro-*

jecting mouth-piece and cap, they constituted if circular a fixed pivot, and the rod as a pivot was useless."

16. The Court below erred in the following expression of opinion on the Bostwick invention:

"*Considering its great proportionate weight and very considerable surface, resting on and covering the cap, the only use of this central rod in connection with* ROTATING *the iron would seem to be to prevent the cap from rotating with the iron while the iron was rotating on the projecting mouth-piece and cap, as an axis.*"

17. The Court below erred in the following expression of opinion on the Bostwick Patent:

"*Altogether, the Bostwick tool in shape, operation, and principle, appears to me to be different from Defendants' tool, and in no manner suggestive of it.*"

18. The Court below erred in the following description of the apparatus used by the Defendants:

"*The soldering tool used by the Defendants, is known as the Tillery soldering tool. For our present purpose, it may be sufficiently described as consisting of a rod, the point of which is to be placed upon the centre of the cap of the ordinary oyster or fruit can. Attached to this rod, so as to revolve around it, is an arm, much the shape of a carpenter's brace. In place of the bit of a carpenter's brace, an ordinary straight soldering iron is inserted. The point of this iron in the exhibit is curved so as to represent a very small arc of the circumference of a small circle.*"

19. The learned Judge erred in the following expression of opinion:

"*After a careful examination of the models of all these tools, it does not appear to me that either the Barker or Bostwick models, or descriptions, could ever have suggested to any*

mechanic, the construction of the tool which is complained of as an infringement."

20. The learned Judge erred in the following expression of opinion:

"To take the old-fashioned soldering iron, and instead of shaping its end into a blunt point, to shape it into the arc of a circle, for use in soldering a circular crease, could hardly be said to require invention, and such a shaping of it cannot, I think, be made out to be in any fair sense the equivalent of an annular iron, such as is used in either the Barker or Bostwick Patents."

Under this point, we will urge that the learned Judge has altogether mistaken the meaning and construction of both the Barker and Bostwick Patents; to take the old-fashioned soldering iron, change the shape of its end, until it conforms to the shape of a circular cap upon the can, turn it upright, provide it with a rod for holding the cap, arrange the rod with this iron, so that the iron may turn back and forth, until the melted solder is spread evenly around the edge of the lid, and so that the iron may be lifted to allow the solder to cool and harden whilst the rod was still holding the cap in place, and prevented the cap from being lifted up by the iron when it was withdrawn, was the invention of Barker, not a mere shaping of the end of a soldering iron.

21. The learned Judge erred in the following expression of opinion on the Barker and Bostwick Patents:

"Nor could either of those patents be operated with a soldering iron of any such shape as the one used in the Tillery tool."

22. The learned Judge below erred in the following conclusions:

"The conclusion to which I have come is, that the two patents on which the Complainants base their suit, are for combinations in which the form of the instrument is of the

essence of the invention, and that the Complainants are entitled only to substantially that form of instrument which in his specifications and drawings, the patentee, under whom they claim, has shown."

23. The Court below erred in the following expression of opinion:

"*Putting upon the claims of the re-issues that restricted construction, necessary to bring them within the invention clearly and accurately described in the drawings and specifications of the original patents, I do not find that the defendants, in using the Tillery soldering iron constructed as shown by the Exhibits produced in this case, have been guilty of infringing any of the exclusive rights to which the Complainants have become entitled as the assignees of either the Barker or Bostwick inventions.*"

24. The learned Judge erred in dismissing the bill.

Brief and Argument on Behalf of Appellants.

This case was argued in the Court below upon the issues joined therein, and after the argument was concluded, was held for some time by the Court under consideration. Just before the decision was reached, the number of the Official Gazette containing the decision of the Supreme Court in the case of the *Swain Turbine Co. vs. Ladd, came out*, (19 *O. G.*, 62,) and the learned Judge, following as nearly as possible the precedent set in that case, rendered his decision in this.

As we interpret the decision below, it means, in short, that the essence of the inventions, lays entirely in that specific form of device shown in the original patents, the Defendants have not used exactly this form and, therefore, do not infringe the original patents, the Court is willing to give to the Complainants all that the original patents could fairly be construed to contain, and giving them this, the Defendants do not infringe. The Court will pass no opinion upon the validity of the re-issues, except that we will not construe them so broadly so as to hold the Defendants guilty of infringement, because they do not infringe the original patents when those patents are given the limited construction, which in the Court's opinion, ought to be put upon them.

The argument of this case, on behalf of the Appellants, will be confined to the issue made by the Court below, viz: Were the original Barker and Bostwick Patents infringed by the apparatus used by the Defendants?

We will, therefore, ask the Court's attention to the subject-matter of the inventions as contained in those original patents, their construction and scope, as tested by the evidence, and state of the art.

It will be seen that the case at bar, in some respects, is like the case of the *Swain Turbine Co. vs. Ladd*, referred to by the Court below in rendering the decision, and in other respects it is as unlike it, as a case could well be.

It is like that case in that the same issues are brought up by the appeal; the Courts below having determined in both cases, that the original patents had not been infringed, and the questions examined by the Supreme Court, was in that case confined to the single issue as to whether the original patent was infringed or not.

It is altogether *unlike* that case in that the patentee therein, was not the original inventor of a water wheel, he had invented only an improvement in a well-known class of water wheels. The Jouval & Fourneron wheels were of this type and were in general use; but upon re-issue this Court declared that the claims had been so expanded as to embrace a wide monopoly of structure, which was not shown or fairly indicated as his invention in the original patent.

In the case at bar, there can be no doubt that Barker was the original inventor of a soldering tool, that he introduced for the first time a soldering tool, which had never been seen or used before, that this soldering tool contained specific features which constituted its value, that it was worked in a way described and pointed out in the original specification.

When this re-issue was granted, the examiners-in-chief in rendering their unanimous decision, use the following language which we will place in italics:

"*The applicant was clearly the pioneer in this ingenious and expeditious mode of sealing, which may be varied in many ways.*"

There would seem to be a degree of fairness in referring the parties to the original patent as a test of his ground of action against infringers, and we are aware of no case reported in the books in which a decree was refused to Complainant where the Defendant had been guilty of infringing the original patent.

More than twenty years ago Mr. Justice Grier rendered the decision of the Supreme Court, in the case of *Burr vs. Duryee*; it was a case in which there had been a re-issue with greatly expanded claims, and throughout the entire case the underlying feature of the decision, was the determination of the Court to give to the patentee the benefit of all to which he was entitled by his original patent, the very first sentence in the decision, lays down this rule in the following words:

"*The great question in the case is, whether the Boyden machine infringes the patent originally granted to Wells for his invention.*" *Burr vs. Duryee*, 1 *Wal.*, 531.

Prior to and about the year 1870, the art of packing canned goods, was in the first stages of development. The cans for receiving the provisions to be packed, were placed in the hands of tinners or experienced men who understood the art of working in tin, and especially the art of soldering. The first form of can in which these goods were packed, was made with a perfectly plain top, in which was an opening or hole for the insertion of the provisions, over this hole was placed a plain piece of tin, circular in form, and large enough in diameter to cover the hole in the top of the can. When the provisions were inserted, this cap was placed over the hole, and the old fashioned straight soldering iron in the hands of a skilled workmen was employed to solder the cap in place over the hole; such a can is shown by Exhibit Casey, and is testified to by Casey, p. 122. The crease surrounding the hole in the can head into which the cap was placed, was not at that time in general use, but was beginning to be adopted by the trade. In order to hold the cap in its place, during the operation of soldering, the workman held the can with the thumb and three fingers of the left hand, whilst the index finger of the same hand, provided with a finger stall of wood or other non-conducting material, was held tightly upon the cap; a block of solder on the table furnished the means of sealing; the workman with the soldering iron in his right hand, rubbed it upon the block of solder until it retained a portion on the

end of the iron, this he transferred to the edge of the cap and can head, making one or two strokes with the iron until a small portion of the edge was soldered, the can was then turned a little with the left hand, and the iron again rubbed upon the solder block to obtain more solder, this again was transferred to the cap and can head until the seam was entirely closed with solder and sufficiently tight. Another method was to use a stick of solder in the left hand, upon which the heated iron was rubbed until a few drops of the molten metal fell upon the edge of the cap and can head, then by pressing the stick of solder upon the top of the cap the operator held it, whilst with the iron the parts were rubbed until the solder adhered. This was a slower process than the other, as the workman was obliged to lay down either the stick of solder or the soldering iron, in order to turn the can.

On the opposite page will be seen a wood cut of the old fashioned method of soldering the cap on a can.

It was by no means easy to obtain skilled workmen who were able to cap these cans—the art of soldering is not as simple as it appears; an unskilled person is just as apt to rub all the solder off of the tin as he would be to make it adhere. these workmen were skilled tinsmiths who had served apprenticeships at the business, and as skilled mechanics they charged for their labor the wages of the skilled mechanic; it frequently happened that just in the midst of the busy season, with the goods purchased and ready to be packed, these men would strike for higher wages—the manufacturer who had probably contracted for the sale of his goods at a fixed price, was forced either to lose the articles of food which he had purchased for packing (often of a perishable nature,) or accede to the demand of the cappers. The cappers held the packers at their mercy.

It had been felt by the trade for a long time that a method of capping was necessary to enable the packers to feel safe in their business, and in addition to the strikes of the workmen, the consumption of solder was enormous upon cans

METHOD OF SOLDERING CAP ON CANS
IN USE AT THE DATE OF THE BARKER
AND BOSTWICK INVENTIONS.

capped in the old way, and not only diminished the profits to the packers, but prohibited them from reducing the price of canned goods to the public.

Efforts had been made to produce some method of soldering: the only one, however, prior to 1870 at all known, was the cumbersome machine of Gray, which about the year 1867, had been attempted to be introduced to the trade and had been entirely abandoned as a failure, the parties making the experiment going back to the old straight soldering iron in preference.

See testimony of Mark O. Shriver, p. 141, of the record.

Inventors responding to the want were developing their ideas throughout the country, some of them proceeding in the way of ponderous and cumbersome machinery like Grey and Bishop, whilst others were engaged in producing a hand implement, like Barker, Bostwick and McMurray. It is somewhat curious to observe, that these inventors pursuing their ideas on their own lines, Barker in Pennsylvania, Bostwick, McMurray, in Baltimore, and Bishop in Brooklyn, brought out their devices all within the period of thirteen months, beginning in May, 1870, and ending in June, 1871.

The first of these in order was Barker, May 17, 1870, and the next was Bostwick, June 21, 1870.

A learned Judge in rendering the decision in a patent case uses the following language:

"It not unfrequently happens in the progress of the mechanic arts, that the time arrives when the whole atmosphere of inventive thought is quickened with the life of an approaching discovery; that many lines of investigation and experiment converging for a long time toward the point, almost but not quite reach it, when at last some mind by a happy thought supplies some new element, or instrument, or mode of organization, and almost instantly gives birth to the organized idea."

It was the good fortune of Barker to devise the means, by an instrument whose organization, construction and mode of operation gave birth to the idea which has been closely imi-

tated by every successful soldering tool in use since the date of his invention. It also fell to Bostwick one month after to patent an improvement upon the Barker iron, which has also been followed and copied in all of them.

By these improvements the packers found that they were no longer at the mercy of their employees. A boy from the corn field would do almost, if not quite double the work of the most experienced tinsmith in capping cans. The amount of solder used was diminished to but one-fourth of the quantity used by the old process with the straight iron, and packers adopted them, a few at first, increasing gradully, till at the present time these tools are well-known and in almost general use.

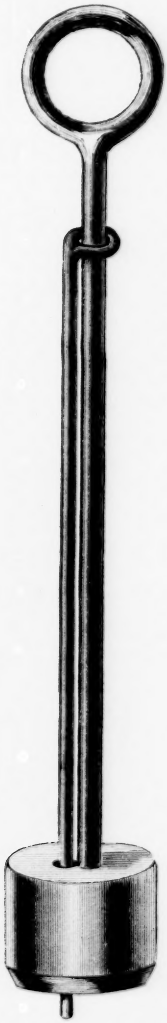
The specification of the Barker original patent begins on p. 29 of the record.

It will be observed that this patent to Barker does not limit the thickness, height or size of the soldering iron. It should be of "*sufficient thickness to retain the heat*," of "*suitable size to cover the lid of the can*," the lower end was to be provided with the recess *B*, the purpose of which was "*to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover.*" The rod is then described, and the manner of opening a can. Then follows a full description of the mode of operation, by which the can is sealed or closed. The rod is to be placed on the cap "*to hold it ;*" the iron is then pushed down "*in contact with the solder or sealing material till it is melted*," then "*turned back and forth*," till the solder is spread evenly "*around the lid.*" The iron is then withdrawn, "with the rod D *still pressed* upon the lid, till the solder or sealing material sets or hardens."

Then follows the claim; but two elements are claimed—the soldering iron and the rod ; the only limitation upon the soldering iron is the recess *B*, in the under side, as set forth, and the function of the rod as specified in the claim is "to hold the lid *while resealing or closing.*"

THE BARKER,

As shown in Exhibit J. D. W., No. 1, and others.



In the case of

The Chicago and North-Western Railway Company vs. *Sayles*, 15 O. G. 244, Mr. Justice Bradley, in delivering the decision therein, uses the following language:

"Like almost all other inventions, that of double brakes came when, in the progress of mechanical improvements, it was needed; and being sought by many minds, it is not wonderful that it was developed in different and independent forms all original, and yet all bearing a somewhat general resemblance to each other. *In such cases, if one inventor precedes all the rest, and strikes out something which includes and underlies all that they produce, he acquires a monopoly, and subjects them to tribute.*"

We are convinced and we expect to show to the Court that Barker struck out and patented a soldering tool, consisting of the soldering iron and the rod, the iron made so as to cover the cap and "confine the soldering process to the outer-edge of the lid or cover," with a provision within the iron "to give room for the convex lid of the can"—an iron which could be pushed down "in contact with the solder," whilst the rod held the lid, which could be "turned back and forth" over the solder, spreading it "evenly around the lid," and which could be withdrawn to allow the solder to harden with the rod "still pressed upon the lid." That Barker preceded all the rest, and in the language of the examiner-in-chief we will show that Barker "was *clearly the pioneer in this ingenious and expeditious mode of sealing, which may be varied in many ways.*"

The state of the art as known practically, was the old hand method, with the old fashioned straight iron like *Exhibit Platt* which is filed in the cause and testified to by several witnesses; the method of using this old iron we have already explained and illustrated; it will be observed that this iron could not be used in an upright position, being square and pointed at the end; it had four edges on the sides, which were used as far as could be by the skilled workman in soldering. To turn it up perpendicularly, and to attempt to sol-

der a cap in this way would accomplish nothing but to scrape a large part of the solder off from the joint. The examiners who said that Barker "was clearly the pioneer in this ingenious and expeditious mode of sealing," were probably as well if not better acquainted with the state of the art than any one in the case, and were certainly familiar with all the references which could be found in the Patent Office; but with the assistance of an able expert and former Commissioner of Patents the defence have been able to find nothing whatever which detracts from the invention of Barker or Bostwick. They have cited *Exhibit Hay* and *Exhibit Carson*, one rejected application, *Exhibit Stone*, and one forfeited application, *Exhibit Foust*. Taking these exhibits in their order, we will examine first

"EXHIBIT HAY."

The specification and drawings of this Exhibit are shown, beginning on *p.* 201, of the record.

This Exhibit was filed and quietly dropped; not a word was asked of the expert for the defence in reference thereto; no explanations or testimony explaining its bearing on the case; it was simply filed; not a word was said about it in the argument below.

Exhibit Hay shows one of the efforts in the line of invention, not for capping cans, but for soldering to the body the entire head of the can; it is a machine, ponderous and heavy; the iron used is the old-fashioned soldering iron like *Exhibit Platt*; it required the use of the foot as well as the hands to manipulate, and though patented in 1867, it fell still-born, was never used, and has never been heard of since. The soldering iron held in the position shown in the drawings would not solder the can, and to hold it in the position required with the old-fashioned Platt iron, would require as much skill as to solder the can in the old-fashioned way—indeed, the only attempts to use this machine, of which we

have any knowledge, were those of Messrs. *Counselman* and *Shriver*, two of the witnesses for the defence.

Mr. Counselman's testimony is to be found on pp. 138 and 139 of the record. He is not certain about the time he tried it, and in his effort to describe it, says he is not certain about it, as it is so long ago it might have slipped his memory; his whole testimony shows an effort to remember something about it.

Mr. Shriver's testimony begins on *p.* 139, of the record. He *thinks* it was the Gray machine; he *thinks* it was in the fall of 1867; could not say whether the iron was lowered or the can raised; was not positive whether the can revolved or the iron. In answer to *Cross-Int.* 9, he testifies:

"*Ans. I really would not like to describe the machine, as it has been so long ago, that my memory might be at fault.*"

In cross-examination, after testifying that he had not seen the machine since the time it was used, that it was used only about ten days, and that he did not know what became of it, he was asked:

"*6th Cross-Int.* Why did you use this machine for only ten days?

"*Ans.* It was roughly constructed, and it *got out of order*, and it *did not facilitate our work.*

"*7th Cross-Int.* What irons did you use before and since you used that machine?

"(Objected to.)

"*Ans.* We used the *old square iron* like Exhibit Platt. I never knew of any other arrangement before that. Since then we used the Thomas machine that I spoke of, at least Mr. Thomas had it there, I don't know whose machine it was, I don't know how long we used the Thomas machine, *but we never discarded the old straight iron, like Exhibit* Platt, *we used McMurray's machine there also.*"

The italics are our own, the Gray machine was tried for ten days, it was evidently a failure, he has never seen it since, and preferred to go back to the old-fashioned tinners' iron.

"EXHIBIT CARSON."

The certificate of the Patent Office attached to this Exhibit does not certify it to be a patent at all, but merely the specifications and drawings. Such a certificate could hardly put the case within the meaning of the statute which requires that the thing shall be a *patent* or a *printed publication*, even if the Exhibit were such as to bear upon the case in any relation. But the invention of Carson was, as he himself describes it: "*my invention of improvements in treating eggs for the purposes of food.*" The whole process has relation to this purpose. Among the drawings is a plan and section of a ring. Of this the specification says: "Figure 7 shows a plan and section of a tool for melting the solder in the groove where the cover of the case or vessel is fastened."

Not another word in the entire specification, as to its purposes, uses, or how constructed. Fig. 7 shows a ring and that is all.

As with Exhibit Hay, so with Exhibit Carson; it was simply filed and has never been alluded to since. Not a word is asked of Defendant's expert in regard to it. No explanations were asked, no comparisons made, nor even an effort to show its bearing on the case.

The expert for Complainant, Mr. Williams, however, was asked to compare this Exhibit with the Barker and Bostwick patents. His testimony upon the subject is found upon p. 301, of the record as follows:

"37*th Inter.* Look at Defendant's Exhibit, Samuel Carson, and say if you have read and understand the same; and if yea, compare said Exhibit with the Letters Patent of Barker and Bostwick, point out the differences and resemblances between them, and give your reasons for any opinion you may express?

"*Ans.* I have read and do understand the same. I find Figure 7 in the drawings to show a plan and section of a simple ring, of whose construction, the following words in

the specification are the only description: 'Figure 7 shows a plan and section of a tool for melting the solder in the groove, where the cover of the case or vessel is fastened.' Conceiving, as I do, that the construction and use of this ring is substantially that of the Foust Exhibit, minus the handle of the latter, my last answer applies literally to the present question: no rod or weight, central or eccentric, pivotal or otherwise, is shown or described as combined with the ring, It is no anticipation of the Barker or Bostwick invention. The Carson invention is described to consist of 'certain improvements for treating eggs for purposes of food,' and the apparatus used has no resemblance whatever to that described in the Barker and Bostwick Patents."

The two Exhibits *Hay* and *Carson* constitute the whole defence to these inventions so far as patents or printed publications are concerned. There are, however, in the case two other Exhibits; one a forfeited and the other a rejected application. These are filed as Exhibits *Stone* and *Foust*.

Not a word is asked of the experts for defence in relation to these Exhibits. They were abandoned by the applicants at the Patent Office, and have never been alluded to in any part of the case by counsel. Neither of these applications if allowed, would have barred the patents of Complainants; the only use which it seems to us can be made of them is to show the efforts and failures of others in the line of improvements in soldering tools.

But neither a forfeited nor a rejected application can be termed *a "patent"* or a *"printed publication."*

In the case of *Brown* vs. *Guild*, 23 Wal. 209, 211. Mr. Justice Bradley in delivering the opinion of the Court in a precisely similar case, makes the following remarks in regard to the *Remy* machine with which *Remy* planted five acres of corn, walking alongside of it, whilst Burgess was driving.

"Were it not for the application for a patent, it would justly be regarded as an abandoned experiment, incapable of being set up against any other claim. Can the fact

that such an application was made, and afterwards voluntarily withdrawn and never renewed, make any difference? We think not. Had a patent been actually granted to Remy and Kelly, it would have been different. The case would then have come directly within the seventh section of the Act of 1836, which makes a '*patent*' or a 'description in a *printed publication*' of the invention claimed a bar to a further patent therefor. But a *mere application for a patent is not mentioned as such a bar.* It can only have a bearing on the question of prior invention or discovery."

With regard to the Gray patent, not a manufacturer is shown to have used it. At the date of the Barker and Bostwick, not a tool of any other kind or description had ever been used except the old straight iron, and we hear of but two persons who tried the Gray (or Hay,) device. One of them has such a faint recollection of it, that he is in doubt upon almost everything he says. The other, after trying it for about ten days, went back to the old straight iron in preference

As to the Carson, it could not possibly perform the work done with tools made on the principle of the Barker or Bostwick, nor does it contain the features. The same may be said of the rejected applications of Stone and Foust. Notwithstanding all of them the packers persistently held on to the old straight iron until the tools made on the principle of Barker and Bostwick taught them that a boy could do the work of a man, save three-fourths of the solder, and make them independent of their employees.

So far then as anticipating matter is concerned, it is clear that there is nothing to stand in the way of Barker as the first who mapped out a device which includes and underlies all the tools which have come into use since, or of Bostwick, who improved upon Barker's principle.

The great simplicity of Barker's invention, called by the examiner-in-chief "*this ingenious and expeditious mode of sealing,*" would at first lead one to suppose it was a very

easy thing to invent, but simplicity is never an objection to a patent.

In the case of *Bell* vs. *Daniels*, 1 *Fish*, 372, the learned Judge thus instructs the jury:

"The jury are not to conclude that there is no utility in an improvement from its apparent simplicity." * * *

And in the work of Mr. *Bump on Patents*, *p.* 39, he quotes:

"The simplicity of an invention, so far from being an objection to it, may constitute its great excellence and value."

But how often we may see an obvious method of doing a thing when some one else has shown us how to do it. The packers wanted it; numbers of persons tried to do it; it did not occur to Gray, Carson, Foust or Stone, or to any one else prior to Barker's invention, and in addition to these the defence have furnished us with several others who were working to obtain these results and signally failed—failed when patience was worn out in the effort, and their attempts and experiments were abandoned.

These efforts were made, not by parties unacquainted with the business, but by those who had full practical knowledge of it, and knew the requirements of the packers.

The abandoned experiments to which we allude were those of *Burris*, *Hall* and *Winebrenner*.

Had these experiments resulted in any way other than failures, we would seriously ask the Court to reject the tools filed by the defence as evidence in the case. It would be impossible for any plaintiff in a case to protect his rights were such exhibits allowed to be filed and constructed in the manner shown by the evidence in the case. The Hall Exhibit consists only of a drawing, but the others were made and constructed under the following circumstances:

A man by the name of Barney Kegan was employed by the defendants, D. D. Mallory & Co., as foreman; this man undertook also to look after the case for defendants. He went to a workman named Renneberg, and with chalk and sketches mapped out what he desired to have made; when

they were not made to suit him he ordered them to be altered until they were made as he wished. Neither he nor Renneberg had ever seen the apparatus which these tools purported to represent; they were made after this suit was commenced, and after the case was at issue; even the Exhibits filed in the case by Defendants to represent the Barker and Bostwick tools were made by Renneberg without the specifications or drawings of the patent before him.

These Exhibits were offered in evidence and filed in the cause, witnesses were produced to testify upon them, and not until the cross-examination did we discover that they were not made or superintended by the parties who were brought as witnesses to prove a knowledge of them.

The testimony of Edward Renneberg, the man who made them, was obtained by Complainants, and Renneberg was placed on the stand.

His testimony is given on pp. 287-288 of the record, and was taken on the 16th day of April, 1880. He swears as to Exhibits J. F. Jones, J. F. Jones, No 2; (these exhibits are there filed by Defendants as the Barker and Bostwick invention) Burris, Casey and Winebrenner, that he made them all in the months of February or March last (1880), that he made them for Mr. Kegan, who is in the employ of D. D. Mallory & Co., he guesses: of Exhibit J. F. Jones, Mr. Kegan gave him a drawing on a piece of paper in lead pencil, that he got it wrong at first; got the handle underneath and had to raise it; that Mr. Kegan showed him how and where to raise it. Of Exhibit J. T. Jones, No. 2, that Mr. Kegan gave him ideas about it, and marked it off with chalk; he first got the handle in the place where the movable rod should be; Mr. Kegan told him how to change and alter it.

Of *Exhibit Winebrenner* he says, that Mr. Kegan gave him the idea from a drill press; told him he would have to make it so that the coppers would work round, and the machine would raise at the same time.

Of *Exhibit Burris* he says, he told me to make it the same as a brace, and he marked it off, I think, but am not sure.

Of Exhibit Casey he says as follows:

"23*rd Inter.* Now look at Exhibit Casey, and tell us, what instructions, if any, Mr. Kegan gave you for making that machine?

"*Ans.* He marked it off with a lead pencil on a piece of paper.

"24*th Inter.* You have stated in your testimony, that a part of this machine you did not make, tell us which part?

"*Ans.* The revolving iron table, and pedestal upon which the can is to rest were not made by me, except the washer, which I made.

"25*th Inter.* Who made this table and pedestal?

"*Ans.* I don't know.

"26*th Inter.* Who gave it to you?

"*Ans.* Mr. Kegan.

"27*th Inter.* Who mounted this apparatus upon the board?

"*Ans.* I did.

"28*th Inter.* Who directed you how to do so?

"*Ans.* Mr. Kegan.

"29*th Inter.* In making these machines, or any of them, were you shown any patent papers and descriptions, by which to make them?

"*Ans.* No, sir."

When Burris was placed on the witness stand, and after stating his knowledge of capping oyster and fruit cans, says he was engaged in 1863 and 1864 at Mr. Seth's on Albemarle Street; he was asked by counsel for defence. See record, p. 67.

"4*th Inter.* What kind of an iron or machine was used there for capping?

"*Ans. We call it the straight common iron.*"

In answer to a further question of Defendants' counsel, he says he got up an iron himself in 1863 or 1864, and proceeds to describe it as follows:

"The first commencement of it was, I took a carpenter's brace; where the bit goes in, I put a piece of iron, then I took a soldering iron—*a common straight soldering iron*—a' I

lashed it on with two pieces of wire, one on the top and one on the bottom; when I went to cap with it, I found I could not turn my hand all around, *I then laid that aside*,—took some gas pipe, and made one on the style of a brace, and *I used the straight iron*, where the bit goes in on a carpenter's brace, and where I had the capping iron, I put an iron rod, a small piece of rod and capped with it."

After describing the method of using the old straight iron, and the way in which he used the one he got up, he is shown the tool made by Renneberg and Kegan, which the Defendants had already marked Exhibit *Burris*, and was questioned as follows:

"12*th Inter.* Look at the iron now shown you, marked Defendant, Exhibit Burris, and state what you know, if anything, about an iron of the same structure with it? (Objected to.)

"*Ans.* The one I made was out of gas pipe of the same principle as this, *except my soldering iron was straight* instead of curved; *we had no soldering irons that were curved in those days, mine were straight.*

"13*th Inter.* What curve do you speak of in your answer?

"*Ans.* The witness points to the curve at the end of the copper soldering iron attached to Exhibit Burris.

"14*th Inter.* Where was the gas pipe used in your machine with reference to this machine?

"*Ans.* The whole of it from the top down to the set screw was gas pipe, except the rod which rests on the top of the cap, and except also the soldering iron, which was made of copper.

"15*th Inter.* If I understand you correctly, the bent iron in Exhibit Burris, instead of being solid was a piece of gas pipe bent as this is bent?

"*Ans.* Yes, mine was put together by elbows, the gas pipe was not bent. *If I had seen this iron then*, (*Exhibit Burris*,) *it would have saved me a heap of trouble.*"

It was this testimony of Burris' which first informed us that the tool filed by Defendants, and marked, Exhibit Bur-

ris, had no existence two weeks before Burris testified in the case, that it was not gotten up by Burris himself, or superintended by Burris, but was made instead by the defendant's foreman and Renneberg together. After the tool was thus made, Burris was placed on the stand to identify it.

The Court is undoubtedly familiar with the distrust expressed by this Court, and the learned Judges throughout the country, upon testimony of witnesses who are brought upon the stand to testify to things which have happened years before—to remember what he had done by way of experiment, and blend it with the knowledge afterwards acquired by seeing the thing, as invented and patented by another, constantly in use; the mind is apt, says one of the learned Judges, to blend what he did with what he afterwards saw done, and to imagine he had discovered the whole thing—Burris was brought forward as a witness, he is not sure of the year in which he made his experiments, either 1863 or 1864,—16 or 17 years after, his apparatus was broken up and thrown into the scrap heap—He is not asked to make or superintend the construction of a tool, similar to his old abandoned experiment, but one is made for him, put before him, and upon this he is asked to testify. His knowledge of soldering apparatuses, as used in the trade when he experimented, was confined to the "old straight iron." He describes his recollection of what he did. He took a carpenter's brace,—where the bit goes in he put a piece of iron,—took a soldering iron, *a common straight soldering iron*, lashed it on with two pieces of wire, one on the top and one on the bottom—he found he could not turn his hand around, and *laid it aside*. The Defendants have made for him a carpenter's brace; the thing which Burris could not work, and laid aside, they have lengthened and added to it an arm for the insertion of the soldering iron, which Burris had lashed on at the other side of the bit, with wires, to this they add a set screw, and fix it rigidly.

Burris having laid aside the carpenter's brace, began again and made one of gas pipe; he used the "*old straight iron.*"

The Defendants have supplied the exhibit with an iron *curved at the bottom*, to conform in shape with the cap. As soon as he was shown the Exhibit Burris said, "*my soldering iron was straight instead of curved; we had no soldering irons that were curved in those days; mine were straight*," immediately after this he adds in answer to an interrogatory of Defendants' counsel, "*If I had seen this iron then, (Exhibit Burris,) it would have saved me a heap of trouble.*"

After some further questioning, Defendants' counsel asks him as follows, parts of which we will place in italics:

"26*th Inter.* When did you first begin to allow any persons to see the machine?

"*Ans.* In 1864, I think—it was in 1863 or '4, I can't say which—it was when Mr. Seth carried on in Albemarle Street.

"27*th Inter.* To the best of your knowledge, considering the number of people who came into your establishment, how many persons did see that machine up to 1870? (Objected to.)

"*Ans.* I don't know. *After I got done with it I found that it would not work as I wanted it, all hands in the shop might have seen it if they had wanted.*

"28*th Inter.* Why would it not work satisfactorily?

"*Ans.* I had so much trouble with the copper when heating it, I had to take it out all the time.

"29*th Inter.* What other trouble, if any, had you with it?

"*Ans.* The cap would blow—that is, raise.

"30*th Inter.* Then in your opinion it did not satisfactorily perform the work for which it was made?

"*Ans. I know it did not.*"

There was no hesitation about his last answer, it was not a mere matter of opinion about its incapacity to perform its work; he *knew* it.

The cross-examination of this witness, brings out the fact of the complete abandonment of his experiments, we will quote such portions of his testimony, and place parts of it in italics:

"16*th Cross-Inter.* In answer to interrogatory in chief, No. 24, you have stated that at first you did not let any person see it, but after that you did not care who saw it, as you did not think it would ever be of any account. Do I understand you by that answer to mean, that as long as you supposed you had a tool which would work satisfactorily, you wished to keep it as private as possible?

"*Ans.* Yes.

"17*th Cross-Inter.* And do I further understand you by that answer to mean, that you threw it open to the public, and did not care who saw it, only, after you had determined that it would not work, and was of no account?

"*Ans. I threw it among my tools. It was only after I determined it was of no account that I did it.*"

* * * * * * * * *

"24*th Cross-Inter.* Did you abandon this tool altogether, because it was unfit for use for the reasons you have heretofore detailed?

"*Ans. I did, on account of the can blowing. If I had to go over them again to keep them from blowing, I might as well have used the old iron in the first instance.*

"25*th Cross-Inter.* Did you have to go over these cans with the old common iron after using that tool of yours?

"*Ans. Those that I was doubtful of I had.*

"26*th Cross-Inter.* How long since you have seen that old iron which you constructed?

"*Ans.* I see part of it now and then laying around the shop.

"27*th Cross-Inter.* Where did Defendants' Exhibit Burris come from?

"*Ans.* I don't know—I made a drawing at one time in Mr. Brown's office, and this machine must have been made from this drawing or a similar drawing.

"28*th Cross-Inter.* You have never seen that tool before to-day, have you?

"*Ans. No, sir.*"

There could certainly be no clearer case of an abandoned experiment, than this one shown by Burris himself; and here he swears that he had never seen the tool which Defendants seek to show, was his own invention, until the day he was placed on the stand.

But there are additional reasons to explain why Burris' tool would not work, and it will also be shown by Burris' struggles, that it was by no means an easy matter to invent a tool, having the requirements necessary to solder a cap, as shown in the Barker & Bostwick Patents. An examination of the Burris tool will show these defects.

The tool was not self-adjusting like the Barker, the rod being *rigidly fixed* to the arm of the brace; when this rod was placed on the cap, the iron had to be adjusted to be brought in contact with the solder, should one cap be a little higher than the preceding one, or a little lower, the iron had to be again adjusted by the set screw; again, there was no means of lifting the iron, and leaving the rod remain to hold the cap, but on the contrary, when the apparatus was lifted, the rod and the iron would both be lifted together, consequently there was nothing to hold the cap in place, whilst the solder was hardening, as a natural consequence the adhesion of the solder to the end of the soldering iron, and at the same time to the cap, would lift the cap at the point where it touched the soldering, and this would make the cap "blow," and render it necessary to go over them again, to do which he says "he might as well have used the old iron in the first instance;" again—he had never seen an iron which conformed to the shape of the cap, that is, an iron with a recess to give room for the lid, and curved to the shape of the round lid of a can, for these reasons he says he used the old straight iron, as there were no curved irons in those days.

These were the reasons why Burris' apparatus was a failure, and he threw it away, and determined it was of no account; his own testimony on the subject is full, on p. 74 of the record, he testifies as follows:

"18*th Cross-Inter.* Was it possible with that iron to lift the soldering tool from the cap, and leave the rod still pressed upon the cap?

"*Ans.* No, sir; *you had to lift it all together.*

"19*th Cross-Inter.* If one cap were a little higher or one crease a little deeper than another, *would that apparatus be self-adjusting* or would you have to adjust the tool by means of a set screw?

"*Ans.* You would have to adjust the tool *by means of a set screw.*

"20*th Cross-Inter.* When the tool was put in the fire to be heated, you had to take it out, did you not, by loosening the set screw?

"*Ans.* I did.

"21*st Cross-Inter.* When it was heated and you wanted to put it back, what did you handle it with?

"*Ans.* A pair of plyers, or gas nippers.

"22*nd Cross-Inter.* Then you had to *re-adjust* it again?

"*Ans. Yes.*

"23*rd Cross-Inter.* When you lift that tool what held the cap in its place and prevented it from blowing or raising?

"*Ans. There was nothing, and that was the reason I condemned it.*"

The tool made by Burris and thus abandoned as sworn to by himself, has not been produced, no part of it has ever been found; but the defence seeing that the abandonment was conclusive attempt to continue Burris' experiments, as though he never had ceased, and ask him when recalled the following questions, to be found on p. 109 of the record:

"2*nd Inter.* You stated that you abandoned the machine constructed by you in 1863 or 1864, when you found that it would not operate well, state whether or not you subsequently made any improvement upon that old machine, and if so, when?

"*Ans.* I did not make an improvement on the machine *until I saw the one come out with a rod to it,—it was a lift-*

ing rod,—it was the first time Mr. Tillery brought an iron to Mr. Mallory's. As soon as I got my eye on the machine, *I went to examine it*,—Mr. Tillery would not let me. It was in 1871 or 1872.

"*3rd Inter.* Whose lifting rod was this that you saw?

"*Ans.* I don't know whose it was. I saw it attached to this machine."

* * * * * * * * *

"*6th Inter.* If you at that time, that is in 1871 and 1872 made any improvements on the original machine constructed by you, please file with the Examiner the drawings of that machine? (Objected to.)

"*Ans.* I herewith file it marked Exhibit, Defendants' Exhibit, Burris' Improvement.

"(Complainants' counsel objects to the interrogatory and the filing of the Exhibit, because witness has not been asked to describe his Improvement.)

"*7th Inter.* Did you or not make and sell machines constructed like those drawings, and if so, when and to whom did you sell? (Objected to.)

"*Ans. I did, after I saw that rod, in the machine that Tillery had.* I sold them to Mr. Counselman, Mr. Baker, Mr. Barnes, Mr. Hemmenway, Messrs. Frick & Chase."

The cross-examination brings the matter out more clearly, portions of which we transcribe as follows:

"*2nd Cross-Inter.* You say that after you had seen the rod in the machine that Tillery brought to Mallory, you went to work to improve your own machine. Where did you find your own machine?

"*Ans. We did not find the old one.*

"*3rd Cross-Inter.* Then you did not improve the old machine, but made a new one entirely?

"*Ans. That is so.*

"*4th Cross-Inter.* If you made entirely new machines, and sold them as you say, what is the reason you did not bring one of the machines, instead of the sketch you have filed?

"*Ans.* I did not know you wanted to look at it; I have one in my shop I have used, *in fact it was the first one I made* after seeing the lifting rod.

"*5th Cross-Inter.* What is the shape of the iron on the bottom of the machine, as shown in the sketch, Burris' Improvement.

"*Ans. A kind of a half circle.*"

The Tillery iron is the one gotten up by Ewalt and Tillery. It is the iron used by the defendant, upon which this suit is brought. From the above testimony it will be seen that the abandonment of the Burris tool was complete. That he did not find the old machine, but got up a new one; that the new one was not made until he saw the Tillery tool with the rod, a lifting rod; and when Tillery's iron showed him the defects in his previous experiments, he got up the new tool at once. He made a movable rod and an iron, the shape of which was "a kind of a half circle."

It now remains to be seen where Ewalt and Tillery obtained the information which enabled them to make the Tillery iron.

Among the tools filed in evidence in this case is one belonging to Louis McMurray, one of the plaintiffs in this cause, and was patented to Louis McMurray and Robert J. Hollingsworth, on the 6th day of June, 1871, antedating nearly a year any of the patents of Ewalt and Tillery. Both of them saw this tool of McMurray's and from this made the one now in suit. The following testimony of Sam'l A. Ewalt is given on p. 283, of the record.

"*8th Inter.* What was the first circular iron rotating about a rod, which you ever saw? (Objected to.)

"*Ans. McMurray and Hollingsworth.*

"*9th Inter.* When did you first see that iron.

"*Ans.* In the early part *of* 1871, *Mr. Hollingsworth brought it to my shop.*

"10*th Inter.* Was that before or after you and Tillery had invented your patent iron? (Objected to.)

"*Ans. It was before.*

11*th Inter.* Whilst you were getting up that iron, do you or not know, whether Tillery went to see the McMurray iron? (Objected to.)

"*Ans. He did.*

"12*th Inter.* Did he report what he had seen, and if yea, to whom did he report? (Objected to.)

"*Ans. He did; to Mr. Mallory.*"

Tillery and Ewalt made their iron after having seen McMurray's; Burris saw this and then made his own. On the following page is a wood cut of the tool which Ewalt and Tillery saw before making their soldering iron.

Exhibit Hall

This Exhibit consists of five rude sketches or drawings, every one of which were made *after the date* of Complainants' patents. Those patents were issued—the Barker on the 17*th day of May*, 1870, and the Bostwick on the 21*st of June*, 1870.

No tool was produced and none ever made by Hall which would work. His testimony is the record of a man whose patience was "worn out" in his endeavors to make a tool which would work, and were finally given up in despair.

The cross examination of Hall brings out the state of the case plainly. It begins on p. 148 of the record. We will italicise such portions of his testimony as we desire to call to the attention of the Court.

"1*st Cross-Interrogatory.* Look at the drawings which you filed this morning, marked Defendants' Exhibits, numbers one, two, three, four and five, and state when those drawings were made?

"*Answer. About seven or eight years ago.*

"2*nd Cross-Inter.* Since eighteen seventy; you think?

"*Ans. It might have been then, or later;* there were about two dozen of them, and those are all that are left.

"3*rd Cross-Inter.* Defendants' counsel has asked you a number of questions about the use of the old irons, which you have designated as the first, second and third irons, do I understand you, that those irons were ever in actual use in capping cans, or were you only experimenting and improving, in order to get an iron which would work satisfactorily for that purpose.

"*Ans.* That's all I was doing —*only experimenting.*

"4*th Cross-Inter.* When you had constructed the first iron, what precautions did you take to keep it secret?

"*Ans.* I kept it in the process department, *up between the joists.*

"5*th Cross-Inter.* Were the hands at that time permitted to go in and out of the process department?

"*Ans. They were not.*

"6*th Cross-Inter.* Why were they not permitted to go in and out of the process department?

"*Ans.* Because processing at that time was a deep secret, and *kept secret from outsiders.*

"7*th Cross-Inter.* Did you keep this tool hid away between the joists in the process department, because you believed it would be safe there, and could not be seen by the other hands in the shop?

"*Ans. I did, sir.*

"8*th Cross-Inter.* You have said that this first tool you broke up, why did you break it up?

"*Ans. Because it wore out my patience.*

"9*th Cross-Inter.* It was not then a success, I understand you?

" *Yes sir, it was not.*

" 10*th Cross-Inter.* After you had broken up the first tool, I understand, you went to work experimenting on the second, am I correct.

" *Ans. Yes sir.*

" 11*th Cross-Inter.* Was the second one a success?

"*Ans.* *No, I don't believe that was either*, I had about the same trouble that I had with the first one; only I was caught using the second.

"12*th Cross-Inter.* How were you caught?

"*Ans.* I was caught trying to solder a cap with it, by some of the workmen in the house, I don't know who.

"13*th Cross-Inter.* What became of the second one, what did you do with that?

"*Ans.* I don't know—I don't remember certainly what became of it.

"14*th Cross-Inter.* Were you trying to keep it secret when you were caught trying to solder a cap with it?

"*Ans.* I think I was.

"15*th Cross-Inter.* After you had abandoned the second iron, did you then go to work experimenting on the third?

"*Ans.* I did, but the second and third were very much alike.

"16*th Cross-Inter.* Then I understand that you do not consider the third a success either?

"*Ans.* Not exactly.

"17*th Cross-Inter.* Which of these irons was it, the first, second or third, that the can-makers who saw it, told you would never solder a can tight?

"*Ans.* The second iron.

"18*th Cross-Inter.* Which one was it that you sold?

"*Ans.* It was something on the principle of the third iron.

"19*th Cross-Inter.* Then I understand you that it was not either the first, second or third iron that you sold?

"*Ans.* It was not an iron at all that I sold, it was only a wooden model.

"20*th Cross-Inter.* Do I understand you to say that none of these irons were ever used by anybody but yourself?

"*Ans.* Not that I know of. No one but myself.

"21*st Cross-Inter.* After you had broken up the first iron, and did not know what became of the second, what did you do with the third, what became of that?

"*Ans.* I don't know what became of it.

"22*nd Cross-Inter.* How long has it been since you have seen it?

"*Ans.* I don't remember seeing it from that day to this.

"23*rd Cross-Inter.* After you had broken up the first iron, and abandoned the second and the third, do I understand that you then began experimenting on a machine like 'Charles E. Hall Model?'

"*Ans.* Yes, with the drawings.

"24*th Cross-Inter.* You never made a machine like that model, I understand?

"*Ans.* *No, sir.*

"25*th Cross-Inter.* Then the first one that was made, was the one under the orders of Mr. Day, *in* 1876, is this true?

"*Ans.* *Yes, sir.*

"26*th Cross-Inter.* Do I understand you to say, that from the time you made the first machine, up until the time this one was made in 1876, you were continually experimenting and trying to get up a tool, that would be practically useful in capping cans?

"*Ans.* *Only in drawings.* I never made any beside the three that I have mentioned.

"27*th Cross-Inter.* What has been your business all this time?

"*Ans.* Processing in fruit and oyster factories.

"28*th Cross-Inter.* What did Reuben Allen do with the model which you sold to him?

"*Ans.* *I don't know, sir.*

"29*th Cross-Inter.* Have you ever heard of it since, or made any inquiry about it?

"*Ans.* *No, sir, I know I have never seen it since, and don't remember ever asking about it.*"

The experiments of Hall began and ended in drawings; there could hardly be a more complete abandonment than that detailed by Hall in his testimony.

The Court is familiar with the rule of law upon the subject of drawings, without a reduction to practice; but in this

case there is not only no reduction to practice but a complete failure after repeated trials to make the thing work.

EXHIBIT WINEBRENNER.

Like Exhibit Burris, this Exhibit never had any existence; it was made after this suit was brought, by Renneberg under the instructions of Kegan, Mallory's foreman. Winebrenner, the reputed inventor of this Exhibit, was alive, but they did not produce him. The only man who could have told them of his experiments was not placed upon the stand; was not even consulted about the making of the tool which the Defendants filed to defeat the letters patent of the Complainants. They let Winebrenner alone and produce the two witnesses, King and Steiner, to prove what they knew of Winebrenner's experiments.

Beginning with King, after testing somewhat his recollection of an apparatus made by one Calvin Winebrenner at Kraft & Co's, the date of which he fixes at the latter part of 1869, or early in 1870, and recollects it, as he says, by the date of his marriage; they proceed by getting him to describe what he remembers to have seen, and then ask him the following questions, to be found on p. 132, of the record:

"12*th Inter.* If there is any tool in the room made like the tool you describe, please produce it?"

The witness stooped down, and picking up a tool under his feet, where it had been laid for the purpose, answered:

"This is it, marked Defendant's *Exhibit 'Winebrenner.'*"

He says it was used at Kraft & Co's; how long, he was unable to state exactly. Its use was not continued because there was a prejudice against the machine by the regular cappers.

In cross-examination, beginning on page 132 of the record,

He says: the first time he saw "Exhibit Winebrenner" was "last Monday;" could not say who made it; he himself gave the ideas about the machine to Mr. Barney Kegan,

who is employed by D. D. Mallory & Co.; gave no instructions to any one but Kegan, and no one else was with them; made no drawing or sketch of it; did not see it till it was completed, and then saw it in the hands of Mr. Kegan; that Steiner helped to use the machine and helped to make it work. The difficulty was in the iron, it was sharp, "the same as our tipping irons." "Steiner forged it flatter and broader in order to make it work.."

A tipping iron is filed among the exhibits in the case. It is in shape and make precisely similar to the old straight iron, like Exhibit Platt; the tipping iron is however smaller and is used to solder the small vent hole in the top of a can or cap, which is usually closed with a single drop of molten solder, and rubbed a little with the point of the tipping iron. And although this witness has continued in the business as canmaker and capper ever since, in Baltimore and out of it, he has never seen this or any apparatus like it since he left Kraft's in the fall of 1871, and says he does not know what became of it.

WILLIAM STEINER

is then produced to corroborate King. He swears he saw *the first machine other than the old straight iron* at J. G. Kraft & Co's in 1870, about January or February.

In answer to the 7th interrogatory, he says, in his opinion it could have practically been used by a little working to get his hand in; he then describes the apparatus as well as he can, when he is asked the following question:

"12*th Inter.* If there is in the room a machine or tool constructed anything like the machine you have described, please produce it?

"*Ans.* Exhibit Weinbrenner is as near to it as it can be, but I won't positively say whether this is the same pattern, but it worked on the same principle; I mean those cogs and the rod also—the copper was forged *very sharp*, what we call a tipping iron."

In his cross-examination, he says he is not positive about the way the rod was placed in the machine, nor is he positive about the cogs.

In answer to the *4th cross-inter.* as to how long it had been since he saw the apparatus, he says:

"*Ans.* Near about *ten years* since I had it in my hand.

"*16th Cross-Inter.* You have stated that that was the last time that you had that tool in your hand, was that also the first time that you had it in your hand?

"*Ans. Yes, first and last.*"

He also says he is not sure it was January or February, 1870; it might have been in April, or it might have been before that, but thinks it was earlier than May.

The following cross-examination shows, we think, conclusively, that Weinbrenner's efforts were failures, that he kept them a secret and never divulged them to any one. We give his testimony *verbatim:*

"*6th Cross-Inter.* What were the circumstances under which Calvin Weinbrenner showed you this machine?

"*Ans.* Only that he wanted me to try it and see how it would work.

"*7th Cross-Inter.* Why did you try to heat the copper over a gas jet; why did you not heat it over the ordinary fire for heating soldering irons?

"*Ans.* Because he lit the gas himself and started to heat it in that way.

"*8th Cross-Inter.* Who was with you at that time?

"*Ans.* No one but Mr. Weinbrenner; he called me in and shut the door.

"*9th Cross-Inter.* Why did he shut the door?

"*Ans.* He did not wish any of the rest of them to see it I believe.

"*10th Cross-Inter.* Why did he not wish the rest of them to see it?

"*Ans.* I can't answer that. Because he wanted to get a patent on it I suppose, I don't know.

"11*th Cross-Inter.* Why did you tell him it would not work.

"*Ans.* It was self-interest, as I said before.

"12*th Cross-Inter.* You told him that it would not work, whilst you believed that it would work, as a mere matter of self-interest?

"*Ans.* Self-interest and the interest of the men, and for another reason, which I did not state before, on account of the way the iron was forged.

"13*th Cross-Inter.* In going out of the room you told him that you could make it work if he would give you a part interest in it. What did you mean by that?

"*Ans.* If he would pay me for my ideas on it and give me part of the patent, I would try to make it work then, that was what I meant by self-interest.

"14*th Cross-Inter.* Did you believe that iron could work without your ideas, for which you wanted him to pay you?

"*Ans.* I believe it could have.

"15*th Cross-Inter.* Your interest in the men then, was not so strong as to prevent you from making that machine work for an interest in it, is this true?

"*Ans.* That is true—my interest in the men was not so strong as my own self-interest. I was not as much for them as I was for myself.

"16*th Cross-Inter.* You have stated that that was the last time that you had that tool in your hand, was that also the first time that you had it in your hand?

"*Ans.* Yes, first and last.

"17*th Cross-Inter.* Then do I understand that you have never seen that tool before or since?

"*Ans.* I have seen it laying about since, in the closet where they keep their old pipes and things.

"18*th Cross-Inter.* What became of that tool?

"*Ans.* I don't know.

"19*th Cross-Inter.* What has been your business since then, where have you been at work?

"*Ans.* Can-making and capping, I have been at work generally in Baltimore.

"*20th Cross-Inter.* Have you ever seen a tool like Exhibit Weinbrenner in any of the shops, in use for capping cans?

"*Ans.* Not that I remember.

"*21st Cross-Inter.* When did you first see Exhibit Weinbrenner?

"*Ans.* Not till this morning, that I know of.

"*22nd Cross-Inter.* Who showed it to you this morning?

"*Ans.* I saw it at Mr. Brown's office.

"*23rd Cross-Inter.* Who made it?

"*Ans.* I don't know.

"*24th Cross-Inter.* Had you been consulted about it before this morning, and if yea, by whom?

"*Ans.* By Mr. Weinbrenner, Mr. Kraft's partner,—(not Calvin Weinbrenner,) and Mr. Kegan, this was day before yesterday."

In the answer filed in this cause no mention is made of Exhibits, *Burris*, *Hall*, *Weinbrenner* and others, but from time to time, as the testimony proceeded, the Defendants requested permission to introduce witnesses for the purpose of proving prior use, &c. On p. 131 of the record, the Court will find the agreement in relation to the witnesses to be produced to testify on Weinbrenner's experiments: these witnesses were Weinbrenner himself, King and Steiner. It was not until the Defendants closed their case, that we discovered Weinbrenner was not to be produced by Defendants, we knew by the notice he was alive,—and by the testimony of Defendants' witnesses, that his brother was at Kraft & Co's, so they leave their case on this Exhibit, with the testimony of King and Steiner, and force the Complainants to hunt up Renneberg, who made the tools, and Weinbrenner the reputed inventor of this Exhibit of the same name. We found Renneberg, and his testimony is already given, and finally, after a long search, found Weinbrenner, and placed

him on the witness stand. His testimony begins on p. 314 of the record.

This witness begins his testimony by declaring when and where he had served his apprenticeship as a machinist, and finished it with a Mr. George Frick, on May 28th, 1870. After he had finished his time, he went to Hanover and stayed there "about six weeks or two months,"—then came to Kraft & Co's at Baltimore; this was the *first time* he had ever had employment in Baltimore City, and had never been at work there before.

According to this testimony of Calvin Weinbrenner, the Barker Patent had been granted *eleven* days before he had finished his apprenticeship, and two months before he came to Baltimore, and the Bostwick Patent, which is dated one month later than the Barker, was granted at least a month before Weinbrenner came to Baltimore.

He then swears that he did get up a soldering tool about six months after he was at work at Kraft & Co's, and had never gotten up a soldering tool for capping cans, anywhere before that time.

So, that, according to this witness, his first effort in this line, was some *eight months* after the date of the Barker Patent, and *seven* months after the Bostwick.

He further swears that this tool was made by Flynn & Emrich. (See Ans. to 24th Inter.)

Mr. Emrich confirms the statement of Weinbrenner, as to dates. He produces the books of the firm; the only tool which that firm ever made for Kraft & Co., or Weinbrenner, (after a search back as far as the 1st of February, 1867,) was one upon which work was begun on the 30th day of January, 1871, and the last entry made on February 11th, of the same year.

But the testimony of Weinbrenner on the fate of his experiment, forcibly illustrates the danger of accepting such evidence as that of King and Steiner, not only as to the time at which the thing was tried, but also as to its construction, and further illustrates the danger of accepting a tool as evidence, made by other parties than the one who was supposed

to have gotten it up; when it was agreed that Weinbrenner, King and Steiner, should be examined, we certainly supposed that any tool about which they would testify, would be an original, and had no idea that the tools filed, had been made to order, expressly, to suit the exigencies of the case.

The testimony of Weinbrenner, shows conclusively, that, like the Burris and Hall experiment, they never came to anything, and were abandoned and thrown aside, it is to be found on pp. 314-15-16, &c., of the record, and without transcribing it verbatim, we will give a synopsis of it, and request the Court to read it.

He swears he had a kind of a shaft turned—*thinks* he had a hole through the centre of it, as near as he can remember, *there was to be* a rod then to go through that, with a spring on the inside of it, to adjust itself to the can. The arrangement to hold the iron *was not made* at that time as he wanted it, *it was to be made* with a slot, and the iron put in, then to be adjusted to the cap, "but *it was made* with a set screw, and I had to bend the iron to suit the can I was trying." "*I only at that time capped two cans.*"

"14*th Inter.* Did you ever cap any other cans than those two with the machine?

"*Ans. No, sir.*"

He then says that he took a good deal of care at one time to keep the machine a secret, did not let any body see it but his brother and William Fait in the office, as near as he can remember.—His idea was to have a rod made for the machine, *but never did have it made*, nor did he ever have the slot made for the iron, so as to be adjustable to the cap.

He then answers the following question, on p. 315 of the record.

"20*th Inter.* I understand you then, that the tool was not made or finished according to your wishes, having neither a rod nor a slot, such as you desired,—did you ever get a tool made at any time with those improvements, which you have just detailed?

"*Ans. No, sir.*"

He put this tool in the cupboard under the steps, guesses it was broken unless his brother has taken it away.

As to the two Exhibits, *centre rod* and *Casey*, there is nothing to say which has not been already said upon the others, they never had any practical existence, and would have no bearing on the issue of novelty if they had.

There is but one other to notice, and that is Exhibit Foust.

This is a plain piece of cast iron, rounded at the end in the shape of a ring, with two flat faces, one on each side, it had *no rod*, nor was ever intended to solder a can, it was designed for house-keepers to open cans by melting the solder, so that the cap might be pushed off by the tool itself, and without the use of any other instrument.

There is not a word of testimony, to show that the apparatus would work.

Foust made an application for Letters Patent, and was rejected,—the following short examination of Foust, we quote in full:

"1*st Cross-Inter.* When you made your application, as contained in Defendants' Exhibit, William Foust, what happened to it?

"*Ans.* It was rejected.

"2*nd Cross-Inter.* After it was rejected, what did you do, what further steps did you take?

"*Ans.* No further, I got rid of my castings.

"3*rd Cross-Inter.* How did you get rid of your castings?

"*Ans.* I sold what I had left to a foundry-man, for scrap iron to melt over.

"4*th Cross-Inter.* Do you mean by your castings, all the tools you had left like Defendants' Exhibit, Foust tool.

"*Ans.* Yes.

"5*th Cross-Inter.* Have you done anything with it since, or made any tools since?

"*Ans. No, sir.*"

"6*th Cross-Inter.* I understand you then to say, that you abandoned the entire apparatus, patent and all, after the rejection?

"*Ans. Yes.*"

In order to use an apparatus like the Foust, it would be necessary to have a rod like that of Bostwick, so as to guide and hold it in position —with the tool as Foust constructs it, it would require quite as much skill, if not more, to solder a can, than with the old straight soldering iron.

This case of Foust comes directly within the ruling in the case of *Brown and Guild*. We allude to the *Remy* machine, cited in that case to anticipate the patent.—The Remy machine had not the runners,—the Foust machine has no rod. The Remy machine did do the work required of it. There is not a word of evidence, that the Foust machine ever did or ever could solder a can. This Court said the Remy machine was an abandoned experiment, not saved by his application for a patent. Foust himself swears he abandoned his machine, patent and all, and sold what he had left for old iron.

Brown vs. Guild, 22 *Wal.* 181.

From the above history of the art, we believe it is evident that Barker was the first man who ever made an upright implement or soldering tool, conforming at all to the shape of the edge of the cap, *i. e.* with "a recess" to give room for the cap, and *confine the soldering process to the outer edge of the lid or cover*, "*in combination with a rod to hold the cap whilst sealing or closing.*" That he was the first man who performed this work by the mode of operation, circumstantially described in the specification, by first putting the rod on the cap to hold it, then putting the heated iron down "*in contact with the solder*" to melt it—then turning the iron "*back and forth*" to spread it,—then lifting the iron with the rod "*still pressed*" on the cap, until the solder could set or harden.

From the foregoing testimony, it is also certain that the old fashioned straight iron was the only one known at the time of this invention; there is not a witness in the case who ever knew or ever saw any other kind of iron in use, and in this

we allude to the witnesses on both sides. It is also evident that all of the experiments were tending to do away with the skilled labor necessary to use of this iron, and Barker was the first man who blocked out and patented an instrument, which in its construction and mode of operation underlies all of the tools which followed,—and that Bostwick improvement on the Barker has been equally copied by all of them.

If this be true, and we think there can be no doubt of it, what is the rule of construction, whereby the scope of the patent should be ascertained?

In a case decided by this Court more than thirty years ago, after elaborate argument and full discussion, this rule was laid down by Mr. Justice Curtis, who delivered the opinion of the Court.

We allude to the case of

Winans vs. Denmead, 15 *How.* 330.

In this case, the Court first consider the *structure* of the device, and then its mode of operation.

The Court says:

"Its substance is a new operation by means of which a new result is obtained.

"It is this new *mode of operation* which gives it the *character of an invention*, and entitles the inventor to a patent; and this new *mode of operation* is, in view of the Patent Law, *the thing entitled to protection.*

"Now while it is undoubtedly true that the Patentee may so restrict his claim as to cover less than what he invented, or may limit it to one particular machine, excluding all other forms, though they also embody his invention, yet such an interpretation *should not* be put upon his claim, *if it can fairly be construed otherwise*; and this for two reasons:

"1*st*. Because the reasonable presumption is, that having a *just right* to cover and protect his *whole* invention, he *intended to do so.*

"2*d*. Because specifications are to be *construed liberally*, in accordance with the *designs of the Constitution and the Patent Laws* of the United States, to *promote the progress of the useful arts*, and allow inventors to retain to their own use, not any thing which is a matter of common right, *but what they themselves have created.*" * * * * *

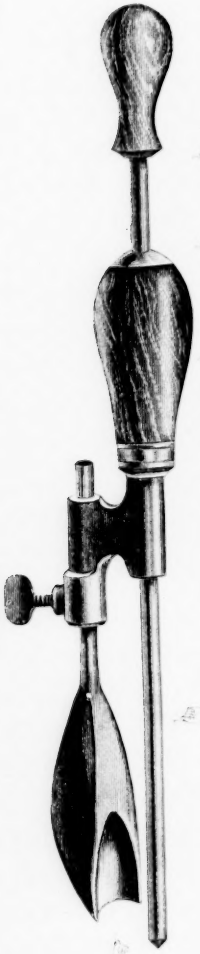
"It is generally true, when a patentee describes a machine, and claims it as described, that he is understood to intend to claim, and *does by law actually cover*, not only the precise forms he has described, *but all other forms*, which embody his invention; it being a *familiar rule*, that to copy the *principle or mode of operation*, described *is an infringement* although such copy should be *totally unlike* the original in form or proportions." * * * * * *

"Patentees sometimes add to their claim an express declaration, to the effect that the claim extends to the thing patented, however the form or proportions may be varied. But this is unnecessary. "*The law so interprets the claim without the additions of these words* * * * * And therefore, the patentee having described his invention, and *shown its principles*, and claimed it in that form which most perfectly embodies it, *is, in contemplation of law*, deemed to claim *every form* in which his invention *may be copied*, unless he manifests an intention *to disclaim* some of those forms."

"The law thus settled by the Supreme Court in 1853 has been followed ever since throughout the Country.

"Foss vs. Herbert, 2 Fish. 31. Cahoun vs. Ring, 1 Fish. 397. Union Sugar Refinery vs. Matheison, 2 Fish. 600. Sickels vs. Bordan, 3 Blatch. 535. Whitmore vs. Cutter, 1 Gal. 478. Pitts vs. Wemple, 2 Fish. 10. Judson vs. Code, 1 Fish. 615. Latta vs. Shawk, 1 Fish. 465. Roberts vs. Hornden, 2 Cliff, 510. Le Roy vs. Tatham, 2 Blatchford, 474. Smith vs. Higgis, 1 Fish. 537. Sickels vs. Borden, 3 Blatch. 535. Florence S. M. Co. 110 Mass. 70. Morris & Barnett, 1 Fish. 461. Bridsell vs. McDonald, 6 O. G. 682.

"THE TILLERY IRON."



"The recess B, in the under side to give room for the the convex lid of the can, and confine the soldering process to the outer edge of the lid or can."

Blanchard vs. Beers, 2 Blatch. 411. Whipple vs. Baldwin Manufacturing Co. 4 Fish. 29."

And in the case of the Union Paper Bag Co. vs. Murphy, decided by this Court in 1877, 13 *O. G.* 336, the Court used the following language:

"Nor is it safe to give much heed to the fact that the corresponding device in the two machines organized to accomplish *the same result*, is different in shape or form, the one from the other, as it is necessary in every such investigation to look at the *mode of operation* or the *way the device works*, and at the result as well as at the means by which the result is attained.

"Inquiries of this kind are often attended with difficulty, but if special attention is given *to such portions of the device as really do the work*, so as not to give undue importance to other parts of the same, which are only used as a convenient mode of constructing the entire device, the difficulty of attending the investigation will be greatly diminished if not entirely overcome."

On the opposite page is an illustration of the infringing tool; the tool gotten up by Ewalt and Tillery after they had seen the McMurray device. This is the tool used by the Defendants, and the one against which this suit is brought for infringement. The implement itself is also filed as an Exhibit in this suit.

Without at present alluding to the testimony in the case, the Court will see the construction of this implement to be that described by Barker in his specification. The soldering tool is made:

1st.—Of sufficient thickness to retain heat.

2nd—Of suitable size to cover the lid of the can.

3rd.—With the recess in the under side to give room for the convex lid of the can and confine the soldering process to the outer edge of the lid or cover.

The Barker soldering iron is shown with a whole circle, and a circular recess. The Defendants' with a semi-circle and a semi-circular recess.

As to the mode of operation of the two instruments, we will place side by side the Defendants' own testimony as to how his apparatuses were worked, and Barker's description of the mode of operation of his apparatus in soldering a can, taken from the body of his original specification. The testimony of D. D. Mallory, the Defendant, will be found on p. 56 of the record.

BARKER'S DESCRIPTION.

"In closing or sealing a can, the cover or cap is to be placed in proper position upon the can, and solder is laid upon the edge of the cover. The rod D is pushed down through the tool, and placed upon the cover to hold it. The heated disk or iron is then pushed down in contact with the soldering or sealing material, until it is melted, and then turned back and forth until the solder is spread evenly around the edge of the cover.

"The disk is then to be withdrawn with the rod still pressing upon the lid until the solder or sealing material sets or hardens, when the operation is completed."

MALLORY'S TESTIMONY.

"*4th Cross-Inter.* Would you be able to tell, if I were to repeat the operation of soldering caps on tin cans, whether the workmen at your establishment soldered their cans in the manner I would describe; or, in other words, have you such practical knowledge of the operation of soldering as to know how it is done?

"*Ans.* I should and have.

"*5th Cross-Inter.* You say you use the Ewalt & Tillery iron in your establishment; is it used in the following manner or not: First—place the cover carefully on the can, and put solder around the lid, then put the rod of the Ewalt & Tillery iron on the cover to hold it; then put the heated iron or soldering disk; or tool, down in contact with the solder, until it is melted, then turn it back and

forth, until the solder is spread evenly around the lid, then withdraw the disk or soldering tool or iron, with the rod still pressed upon the lid, until the solder sets or hardens, and the operation is completed. Is this a correct description of the mode in which can-caps are soldered in their places by the process used in your establishment?

"*Ans.* It is." * * *

The claim subjoined to the original Barker Patent following his description of the construction and mode of operation is as follows:

"*The disk A, with the recess B in the under side as set forth, in combination with the movable rod or wire D, to hold the lid whilst resealing or closing.*"

It is undoubtedly true that the Defendants' soldering iron may be turned round and round by a series of successive impulses in one direction, but it may also be turned back and forth sufficiently to spread the solder, and this is the way it is used; any more turning than this would simply be superfluous, and its capacity to revolve is merely an additional function of no use whatever after the object of soldering is accomplished.

It is also true that the Barker tool cannot be revolved in continuous revolution, but can only rotate, and in rotating it stops just when the Defendants' tool stops, viz: when the solder is sufficiently spread around the lid. It cannot be possible that an apparatus with half a circle and half a recess is not the same thing as an apparatus with a whole circle and a whole recess.

Should any one try to discover how much he could shave off the side of the Barker tool before it would cease to work

effectively, he would stop somewhere between a quarter of a circle and a sharp point, the apparatus becoming less and less efficient as the arc of the circle diminished.

In the case above alluded to, *Winans* vs. *Denmead*, Mr. Justice Curtis gives the true answer to questions of this kind, as follows:

"Indeed *it is difficult to perceive* how any other rule could be applied practically to cases like this. How is a question of infringement to be tried? It may safely be assumed that neither the patentee has made or will make a car *exactly circular*. In practice, deviations from a true circle will always occur. How near to a circle, then, must a car be in order to infringe? May it be slightly elliptical, or otherwise depart from a true circle? And if so, how far? In our judgment, *the only answer* that can be given to these questions, is, that it must be so near to a true circle *as substantially to embody the patentee's mode of operation* and thereby attain the *same kind* of result as was reached by his invention.

"It is not necessary that the defendant's cars should employ the plaintiff's invention to as good advantage as he employed it, or that the result should be precisely the same in *degree*.

"It must be the same *in kind* and effected by *his mode of operation* in substance."

The learned Judge of the Circuit Court was in error in his description of the construction and mode of operation of the Defendants' soldering tool.

He describes this apparatus as follows, beginning on p. 336 of the record:

"The soldering tool used by Defendants is known as the *Tillery soldering tool*. For our present purpose it may be sufficiently described as consisting of a rod, the point of which is to be placed upon the centre of the cap of the ordinary oyster or fruit can. Attached to this rod, so as to revolve around it, is an arm much the shape of a carpenter's brace. In place of the bitt of a carpenter's brace, an ordinary straight soldering iron is inserted. The point of this iron

in the Exhibit is curved so as to represent a very small arc of the circumference of a small circle."

This description of the infringing tool is erroneous, as will be seen at a glance, by looking at the tool itself. There is no arm shaped like a carpenter's brace in the Tillery tool; that tool has a wooden handle, through which the rod passes and around or about which it may be turned, either by a series of successive impulses in one direction, or back and forth; performing the same work in the same way as the Barker. This tool having no arm like a carpenter's brace, of course no soldering iron could be inserted in the place of the bitt of a carpenter's brace. And if a soldering iron were inserted in a carpenter's brace in the place of the bitt, its function would be to bore a hole in the object with which it came in contact; such a tool with such an iron could not touch or have any effect upon the solder surrounding the edge of the can cap. The learned Judge is also in error in saying that an ordinary straight soldering iron is to be inserted in this soldering tool or in any soldering tool of the Tillery pattern. Tillery never used and never attempted to use an ordinary straight soldering iron. His soldering irons are all of them arcs of circles, varying somewhat between a half and a quarter circle. This soldering iron when heated and in use, will lose its shape in a day's work; the operator at least once a day forges and files it into shape, and the best workman is he who most carefully forges and files the soldering tool true to the arc of the circle in which the edge travels.

Several witnesses have testified to this. George W. Floyd, a witness for Complainant, speaks of it in relation to the Debow or Tillery pattern of apparatus; these two implements are identically alike in their construction and mode of operation. On p. 289 of the Record, he testifies as follows:

"38*th Inter.* In using the Debow or Tillery irons, how often do the coppers have to be forged?

"*Ans.* That is just according to how many cans you cap with them. I used a two-pound copper Debow Machine yes-

terday, and capped about thirty-nine hundred cans. I had to forge the iron twice, and it was forged when I got it, and I also used at the same time an old copper iron, a Debow Machine, it was forged when I commenced using it and I wore the forge off.

"39*th Inter.* Please state if you can generally, in a fair day's work with one machine of the Debow or Tillery pattern, how often the coppers in those machines would have to be forged?

"*Ans.* I judge about three times in an average day's work."

The witness Coakley also swears to the same thing: on p. 275 of the record, he is examined as follows:

"22*nd Inter.* How often do the Ewalt & Tillery irons have to be forged?

"*Ans.* Working all day you have to forge them twice.

"23*rd Inter.* Does it require skill to forge them?

"*Ans.* It does.

"24*th Inter.* What amount of skill is required in using the Barker and Bostwick iron in capping?

"*Ans.* Not so much."

The learned Judge was therefore mistaken in supposing that the Tillery implement was ever used with an ordinary straight soldering iron inserted. Not a single witness in the case has even hinted at such a thing.

The Court was also mistaken in saying that in the Tillery Exhibit, the point of this iron "is curved so as to represent a *very small arc* of the circumference of a *small circle;*" but how he came to make the mistake was shown afterwards. The Court will remember the apparatus made by Renneberg and Kegan for the purposes of this suit to represent the experiments of Burris, and will no doubt also remember, that without consulting Burris, in their anxiety to prove something in anticipation of Complainant's patent, they inserted in this tool a soldering iron, the point of which "was curved so as to represent *a very small arc* of the circumference of *a small circle.*" During the argument, or probably whilst

THE TOOL MADE BY RENNEBURG,

Purporting to be the Old "Burris Tool."

The soldering iron with the small arc of a circle placed in this tool by Defendants, which Burris swore should have been pointed like the old straight iron.

"The rigid, immovable rod."

the tools were carried about, the soldering irons became loose and dropped out; at any rate it was discovered that this old iron made for the Burris Exhibit and the iron made for the Tillery tool had become interchanged, and no doubt this was what led to the mistake of the Court. The learned Judge's description however of the Tillery tool is very much like that given by Burris of the apparatus which he first tried and laid aside, before he attempted the gas pipe arrangement. His description of that apparatus is given on p. 67 of the record, and is as follows:

"*Ans.* The first commencement of it was, I took a carpenter's brace; where the bit goes in, I put a piece of iron, then I took a soldering iron—a common straight soldering iron—and lashed it on with two pieces of wire, one on the top and one on the bottom; when I went to cap with it, I found I could not turn my hand all round; I then laid that aside, took some gas pipe, and made one on the style of a brace, and I used the straight iron, where the bit goes in on a carpenter's brace, and where I had the capping iron, I put an iron rod, a small piece of rod, and I capped with it."

It will be observed that the drawing of the Barker patent in one figure shows a soldering iron flat on its under surface. An iron like this would work quite well on a can, with a shallow crease like that shown in the drawing. But the ordinary can, as now used, is constructed generally with a deep crease, and on such cans it is preferable to bevel the edge of the soldering tool so as to fit within this crease. The description in the patent is amply sufficient to warrant the beveling of this edge in this way, and is just what a mechanic would do in adapting any mechanical instrument to suit the character of work to be done.

The witness Rosscamp was given the specification, and an ordinary can with a deep crease, and he constructed a Barker soldering tool, which is filed in this case as Exhibit J. D. W. No. 1. With this tool, a large number of cans have been capped. Exhibit Rosscamp is the can which the iron is made

to suit. When asked why he made it in this way, he says, in answer to the 12*th Cross-Inter.* on p. 309 of the record:

"*Ans.* The description says: 'make the disk, casting or tool of sufficient thickness to retain the heat, and of a suitable size to cover the lid or cap of the can, with a recess in the under side, to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover.' It also says, 'the heated disk or iron is then pushed down in contact with the solder or sealing material, until it is melted, and then turned back and forth until the solder is spread evenly around the edge of the cover.'"

In further examination he says:

"15*th Cross-Inter.* Suppose that description had been given you, with the drawings attached, and you were told to make an iron with a diameter of one inch and a half, and to conform it to the description, would you have made that edge beveled or flat.

"*Ans.* I would have made it beveled.

"16*th Cross-Inter.* Why?

"*Ans.* Because the description tells me so.

"17*th Cross-Inter.* Do you mean that it tells you to make it beveled in those parts of the description which you read, in answer to the 12th Cross-Interrogatory?

"*Ans.* Yes, sir.

"1*st Re-direct Inter.* Did Mr. McMurray tell you to make an iron to fit in the crease of the cap or not?

"*Ans.* He did not.

"2*nd Re-direct Inter.* Did he tell you to make an iron with a beveled edge or not?

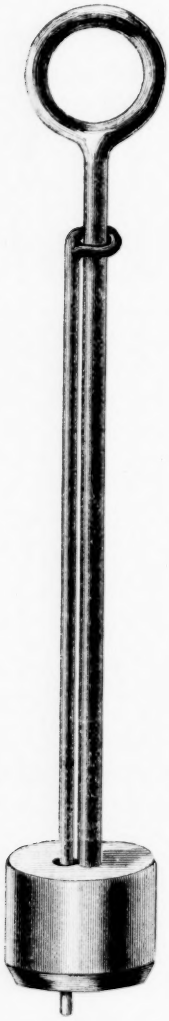
"*Ans.* No, sir."

And the Defendants' witness, Burris, answers to a cross-interrogatory as follows, on p. 72 of the record:

"2*nd Cross-Inter.* Take the can in your hand to which you have just testified, and suppose that can to be the one ordinarily used in packing establishments, with the crease and cap of the shape there shown you, and suppose I were to ask you to make an iron for the purpose of soldering that

THE BARKER.

As shown in Exhibit J. D. W., No. 1, and others.



cap on that can, and were to give you the following instructions: Make the disk or casting of sufficient thickness to retain the heat, and of suitable size to cover the lid of the can, with a recess in the under side of the disk to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover, would you make a tool from that description with a beveled edge, so as to fit in the crease or not? (Objected to.)

"*Ans. I would.*"

The above description was read *verbatim* from the specification of the original Barker patent to this witness.

Mr. Spear, the able expert for the defence, admits that this is the work of a mechanic, and would not vary the Barker tool as described in the patent; on pp. 158 and 159 of the record, testifies upon Exhibit J. D. W. No. 1, the Barker soldering tool made by Rosscamp from the description as follows, parts of which are italicized:

"*9th Cross-Inter.* What does Barker say in his patent about the recess in the under side of the iron, and the function of that recess?

"*Ans.* He states in the original specifications, that 'the recess B in the under side of the disk, is to give room for the convex lid of the can, and to confine the soldering process to the outer edge of the lid or cover.'

"*10th Cross-Inter.* Does Barker under that description or elsewhere in the specifications, limit himself to any particular shape of the soldering iron at the bottom?

"*Ans.* No further than that he described it as a disk.

"*11th Cross-Inter.* Should an iron be so made at the bottom, as to fit in the crease of a can, would such an iron be within the description given by Barker in his Patent?

"*Ans. I think a mere variation in form or outline would not be a material variation.*

"*12th Cross-Inter.* Look at the form or outline of model J. D. W., No. 1, state if that is sufficiently within the description of the Barker Patent, and made in accordance therewith?

"*Ans.* It appears to me to have all the elements of the Barker Patent. There is a variation in the shape of the annular face of the iron, *but I am not advised that that would make any difference.*

"13*th Cross-Inter.* Point out in the specifications of the Barker Patent, what the description is of that annular face to which you refer?

"*Ans.* There is no specific description of the face, but is shown as a plain face.

"14*th Cross-Inter.* Do I understand you to say, that that model, you believe to be made in accordance with the Barker Original Patent substantially.

"*Ans. I see no essential difference.*"

But the Defendants have also filed an Exhibit, representing the Barker soldering iron, and is marked Exhibit, J. T. Jones, No. 2.

This Exhibit was made by Renneberg and Kegan together, Renneberg was not furnished with the patent, nor the specification or drawing; he had not before him a can by which he could be guided as to the size of the instrument,—as a consequence, he made one which would *not* "cover the cap," with a recess which would *not* "give room for the convex lid of the can;" it was not made "thick to retain the heat," but as thin as possible,—it was not made of copper or steel, the metals which are most fitted for soldering, but of cast iron, the metal which of all others is the worst for soldering, and upon this exhibit all the opinions of his witnesses are asked.

We respectfully submit from the history of this case, that the Court below erred in declaring that the form of the instrument was of the essence of the Barker invention,—that the Court erred in construing the form of the instrument composed of the two parts in combination, to be determined by the form of only one of those parts; that the Court erred in supposing that a half circle and half recess were not the same form, as a whole circle and a whole recess,—that the Court erred in supposing that the Defendants apparatus did not infringe, because, in addition to its capacity for soldering

a can by *being turned back and forth*, it could also be turned round and round over the same line of the circle, and that the Court was also in error in supposing that an apparatus containing all the parts of the combination, and operated substantially in the same way was not an infringement, because it had another and a superfluous function, of no use whatever, after the operation of soldering had been completed; that Barker was the first man who struck out something which underlies that of the Defendants', that he was truly the "pioneer in this ingenious and expeditious mode of sealing, which may be varied in many ways," and that the Defendants' soldering tool, is but one of the many ways in which his invention may be varied.

The Bostwick Patent.

The differences between the Barker and the Bostwick inventions may be stated as follows: Barker was the pioneer who first struck out the ground work of a curved iron, which was of sufficient size to cover the lid of the can, with a provision in the iron to give room for the convex lid, and confine the soldering process to the outer edge of the lid, in combination with the rod to hold the lid during the operation of soldering.—Bostwick improved upon Barker's method by making this rod central; but Bostwick chose in the construction of his implement, to make the handle, so as to project horizontally or side ways, and for this reason it was necessary to have a rod which filled the inner space of the iron, in order to guide the iron, not only to its position upon the solder, but to keep it steady and prevent it from getting out of place whilst being turned—with an upright tool, which has no tendency to leave its place; the rod may be readily arranged as a guide, by providing a small aperture for the rod to pass through somewhat above the iron; Bostwick would do the same with a smaller rod, if the iron was made higher and of smaller diameter above, so that it might enclose snugly a smaller rod. Bostwick has fully described

this in his original patent, when he says in speaking of his soldering iron, as "so *extended* and formed interiorily, as to receive and *embrace loosely a guiding rod*, to hold the latter down firmly until it has been secured by the solder, and at the same time guide the iron to its proper place, upon or against the rim or edge of the cap."

In the description of the drawings he says:

"Figure 2, is an elevation of the guiding rod.

"*Figure* 3, is a sectional view of the soldering iron placed upon the cap, so as to solder the same, with its guiding rod in place to hold it down, and guide the iron *in its operation*."

Both the Barker and the Bostwick irons are made to conform in shape to the ordinary circular can caps, this conformity of shape is set out in both of the original specifications, in somewhat different language; in the Barker Patent this conformity of shape is thus described:

* * * * "Of sufficient thickness to retain the heat, and of suitable size to cover the lid or cap of the can, with the recess B, in the under side, to give room for the convex lid of the cap, and to confine the soldering process to the outer edge of the lid or cover."

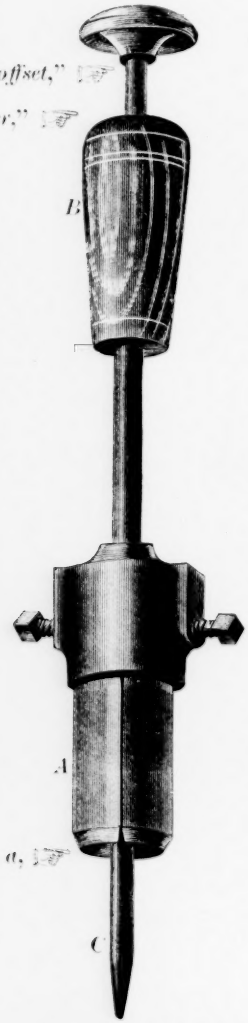
And in the Bostwick Patent as follows:

"Said iron, when made with an inclosing edge, of the dimensions and form of the rim or edge of the cap or piece to be soldered, so as *to conform* thereto when placed thereon."

About the year 1870, Louis McMurray, one of the Complainants in the cause, constructed and operated a tool during the early fall of that year, which combined the best features of both the Barker and Bostwick tools, it was an upright tool, and self-adjusting like the *Barker*, and it had the central rod of the *Bostwick;* the soldering iron being prolonged upwardly by a tube, the inner diameter of which, was diminished at the top, the rod was enclosed and *embraced*, loosely, as a guide in the upright handle.

After the suit from which this appeal is taken was decided by the Court below, owing to the construction placed upon the Barker and Bostwick Patents by that Court therein, Mr.

"THE MILLER SOLDERING-IRON."



THE McMURRAY SOLDERING-IRON.

McMurray brought suit upon his patent, against certain defendants, Miller Bros. & Co. On the following page is a wood cut of this apparatus, as used by Mr. McMurray, and his patent for the same is dated June 6th, 1871, about a year after the Barker and Bostwick; this tool was made, and in full operation, more than a year before that of Tillery made its appearance, and this is the tool which both Ewalt and Tillery saw and reported to the defendant Mallory, before getting up their own.

The tool used by the Miller Bros., is shown on the opposite page, it is identical, as will be seen with the McMurray device, but in addition to it, Miller's apparatus had the iron, or copper, constructed in two halves, so as to be easily inserted and taken out for repair, when required.

This case was argued before his Honor, Chief Justice Waite, who delivered an exhaustive opinion, which quotes in full the Bostwick Patent, and construes the invention therein described and shown. We here insert the opinion, and ask the Court's leave to make it a part of this argument. The opinion is as follows:

LOUIS McMURRAY
vs.
WILLIAM MILLER
AND
JOSEPH MILLER.

IN THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF MARYLAND.

WAITE, CH. J.

"This is a suit in equity to restrain an alleged infringement of a patent issued to Louis McMurray and Robert J. Hollingsworth on the 6th of June, 1871, for 'certain improvements in soldering tool.' The invention consisted 'in an improvement in the construction of the soldering tool for which Letters Patent were granted to J. A. Bostwick on June 21st, 1870, by providing the soldering iron with a verticle hollow stem through which the presser rod plays,

guided in the handle of the stem, as will be generally explained in the following description, and specifically pointed out in the claim.'

Annexed to the patent were drawings as follows: (See opposite page.)

"Fig. 1, Is an elevation of the improved soldering tool, and Fig. 2, a vertical section of the same, showing the mode of operation. The description and claim are in the words:

"The iron A is a short block, having a recess, *a*, formed in one end corresponding in outline with the caps which the tool is designed to solder to tin fruit cans and the like. The rim *b*, bounding the recess, is beveled to an edge, or nearly so. An aperture is formed through the block A longitudinally, which is tapped at the end opposite to the recess *a*, to receive the hollow stem B which is screwed into it. The block and stem may be formed in one piece, if preferred, but both must always be made hollow. The outer end of the hollow stem is screwed into a wooden handle, C, in which a presser rod, D, is snugly fitted. The presser rod passes through the hollow stem into the iron to press upon the cap and hold it firmly to the top of the can while being soldered to the latter. It is made of sufficient length to extend a short distance above the handle C, when it rests on the cap, and terminates in a wooden knob, *d*, on which to press with the palm of the hand or with one finger, while the iron may be turned at the same time with the other fingers of the same hand, taking hold of the handle C. When the iron A is to be heated the presser rod D is drawn out of it a sufficient distance into the hollow stem so that it will not be affected by the fire to any extent.

"In applying the tool, as shown in Fig. 2, the presser rod is projected through the iron A, to first press the cap *c*, down on the can-top E. The handle C is then pushed down on the rod to bring the edge of the iron in contact with the solder *e*, in the crease of the can-top, and fuse it. The iron is lifted off the can-top a moment before the presser rod is,

McMURRAY & R. J. HOLLINGSWORTH.

Improvement in Soldering Tools.

No. 115,760. Patented June 6, 1871.

Fig 1.

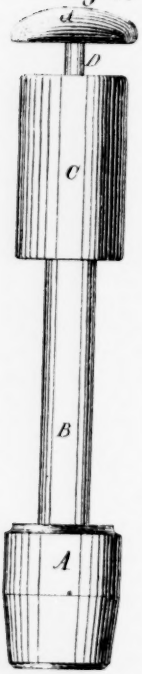
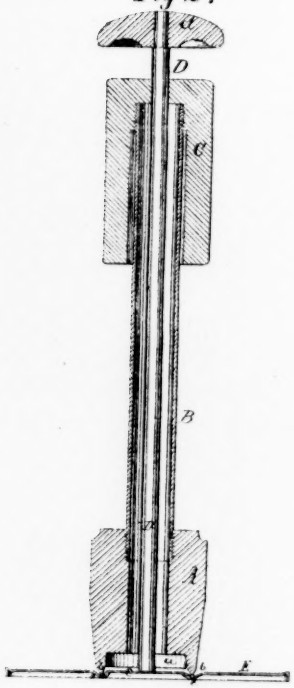


Fig 2.



Witnesses:

James Flynn

Gilliel Sinnert

Inventors.

Louis McMurray

Robert J. Hollingsworth

so as to allow the solder to set while the cap is still being pressed to the can.

"The greater utility of this tool over that patented by Bostwick consists in its compactness, and that it can be operated with one hand.

"What I claim as my invention, and desire to secure by Letters Patent, is—

"The combination of the tububar soldering iron A, hollow stem B, handle C, and presser rod D, which is guided in the handle to play through the stem and soldering iron, substantially in the manner set forth."

"If this patent is valid, there is no doubt about the infringement by the Defendants.

"The case turns, therefore, on the validity of the patent.

"The description and claim in the patent of Bostwick which is referred to, are as follows:

"'My invention relates to the construction and use of a hollow soldering iron for soldering metallic caps, or other projecting pieces, upon metallic oil cans or other vessels, said iron, when made with an inclosing edge of the dimensions and form of the rim or edge of the cap or piece to be soldered, so as to conform thereto when placed thereon, and so extended and formed interiorly as to receive and embrace loosely a guiding rod, to be placed upon the cap to be soldered, to hold the latter down firmly until it has been secured by the solder, and at the same time guide the iron to its proper place upon or against the rim or edge of the cap.'

"After referring to drawings the description proceeds:

"A, is my improved soldering iron, made of a cylindrical form, to solder circular caps, &c. It consists of a cylinder of metal made thick to retain heat, and hollow to fit over and inclose the projection of the metallic cap to be soldered thereby, its inner diameter at its lower end being somewhat greater then the external diameter of said cap.

"It is provided with a handle B, secured thereto near its upper end, guarded, as usual, with wood or other non-conductor of heat.

"Its lower rim, *a a*, is beveled, so as to present a narrow edge to hold the solder in applying the same to the joint.

"The inner diameter of its upper end is made smaller than that of its lower end, so as to form a shoulder, *e*, therein about midway of its length.

"C is a rod, whose lower end is of a diameter about equal to that of the cap or projection to be soldered, but which is reduced in diameter above the same, so as to form a projecting offset or shoulder, *d*, a counterpart of that (*e*) within the soldering iron.

"After the iron has been properly heated, it is slipped over this rod, and the rod, being then placed upon the cap, is held thereon firmly while the lower rim of the heated iron, duly supplied with solder, bearing upon the joint of the cap with the vessel, will instantly solder and secure the same about its entire circumference.

"By lifting the rod, its shoulder, engaging with the offset within the iron, will take up the latter with it in readiness to be placed upon another cap, and thus a number of caps may be quickly and thoroughly soldered at one heat of the iron.

"I contemplate making the soldering iron A and its guiding rod C of any form in transverse section which may be required, to cause it to fit any form of cap or other projection, whether round, square, oval, or of any other curved or polygonal shape. Its lower rim or edge need not be made continuous, but may be broken or slotted.

"I claim as my invention—

"The hollow soldering iron A, having a handle B, and beveled rim a a, in combination with the rod C, substantially as herein described and set forth.'

"In my opinion the improvements made by McMurray and Hollingsworth on the device of Bostwick, fall within the domain of mechanical skill, rather than invention—Bostwick combined a hollow soldering iron having a beveled edge and handle attached near the top, with a guiding or presser rod. His soldering tool produced substantially the

J. A. BOSTWICK.

Assignor to E. M. LANG & Co.

Soldering Iron.

No. 8,466. Reissued Oct. 29, 1878.

Figure 2.

Figure 1.

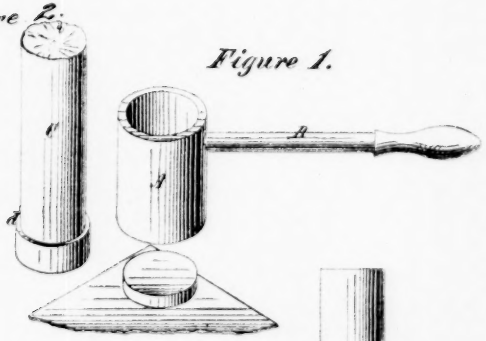
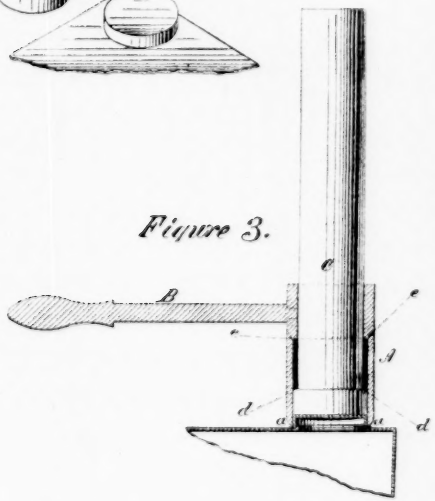


Figure 3.



Witnesses:

George W. Miatt

James E. Kearney

Inventor:

J. A. Bostwick

By David A. Burr

Atty.

same result as that of McMurray and Hollingsworth, and was operated substantially in the same way—The solder iron melted and distributed the solder by his (mode?) to a greater or less extent around or upon the guiding rod, and the guiding rod assisted in conducting the soldering iron to its proper place for soldering and in holding the cap in position until the soldering was done. The handle, in connexion with the space between the shoulder on the guiding rod and the offset on the soldering iron, enabled the operator to move the iron on the can for the purpose of distributing the solder, and to raise it without taking the presser from the cap until the solder was sufficiently set for the tool to be safely removed. The shoulder on the rod and the offset in the iron provided a way of moving the tool when the work was done, and placing it on another can for another operation.

"The patent of Bostwick did not specify the length or particular shape of the soldering iron, further than that it should be beveled at the lower edge, and hollow. It was enough if it was so made that it could be slipped over the rod and guided to its proper place on the can. It might be of any length, any size, or any external shape. Neither was there any special requirement as to the kind of handle, or the way of attaching it. All these matters were left to the judgment of the maker of the tool, and they might be varied to meet the varying requirements of use.

"While the patent of McMurray and Hollingsworth is nominally for a combination of four elements, there are in realty but three, even according to the description that is made. The 'hollow stem' is in legal effect only a part of the 'soldering iron,' for it is expressly stated that the 'iron and stem,' that is to say, the 'soldering iron' and 'hollow stem,' may be made in one piece, if preferable. Construed in this way, the provision in the patent for the soldering iron and hollow stem amounts to nothing more than that the soldering iron should be of sufficient length to allow the attachment of a wooden handle encircling the iron at its upper end, and that in accomplishing this, the iron may be

reduced in circumference as it recedes from the point where the heat is to be applied.

"The device of McMurray and Hollingsworth is then a combination of a hollow soldering iron, beveled at its lower edge, and having a handle at the top, with a guiding or pressure rod. Unless, therefore, there is more substantial difference in the manner of the combination, this device is the same in substance as that of Bostwick.

"The soldering iron and handle are clearly within the Bostwick Patent. The iron is hollow, is beveled at the bottom, and the handle is attached at the upper end. The iron may be longer and somewhat different in shape from that which Bostwick had in his mind when he got his patent, but there cannot be a doubt that if it had been used with Bostwick's other devices it would have been an infringement on his rights.

"Next as to the guiding or pressure rod. The device of Bostwick for guiding the soldering iron to its place is a the bottom of his guiding rod where it comes in contact with the top of the cap to be soldered. That of McMurray and Hollingsworth is in the handle at the top of the soldering iron. In both devices the rod is pressed on the cap to hold it in place, and while in this position it furnishes the means of conducting the iron where the work of that part of the tool is to be done—In both, the hand of the operator is required for the nice adjustment of the iron, and the rod serves only to give the general direction, clearly, therefore, the one is the mechanical equivalent of the other, so far as the guidance of the iron is concerned.

"The pressure rod of McMurray and Hollingsworth can undoubtedly be made smaller than Bostwick supposed it would be necessary for his to be, but he nowhere gives any special direction as to size. His object was to put the cap in place and guide the iron to the point where the soldering is to be done. It is nowhere intimated even that the rod is to be heavy enough to keep the cap in place while the iron is doing its work. It is evident on the contrary that this was not

expected, because it is in express terms provided that after the rod is placed on the cap it is to be *held* thereon firmly, while the heated rim bears on the joint to be soldered. Almost necessarily in working the iron the hand or something else must be used to steady the rod. All this could properly be considered by the maker when he was constructing the tool, and he would be at liberty to vary the length or size of the rod to suit the circumstances. Lightening the rod and supplying the loss of weight by the pressure of the hand would not be invention. It was simply by using mechanical skill to reduce in some degree the weight and cost of the tool.

"Another difference in the structure of the tools is found in the contrivances for separating the rod from the soldering iron, and moving the tool from one place to the other—Bostwick raised his soldering irom from off the rod; McMurray and Hollingsworth drew the rod out through the top of the iron. Bostwick moved the tool by taking hold of upper end of the guiding rod; McMurray and Hollingsworth by the the handle on the top of the soldering iron.

"This was because in Bostwick's tool the shoulder on the rod came in contact with the offset in the iron, on the inside of the iron, and the aperture at the top of the soldering iron was smaller than the bottom of the rod. In McMurray and Hollingsworth's tool, however, the shoulder and offset were transferred to the outside of the iron, the top of the handle on the iron performing the part of the shoulder on the rod and the bottom of the knob on the top of the rod that of the offset, in the iron—Clearly these devices are mechanical equivalents, the one of the other, and not in this connection on the subject of patentable invention.

Looking then at the two tools I am clearly of opinion that McMurray and Hollingsworth were wholly anticipated by Bostwick. Their tool may be, and undoubtedly is more compact, and of greater practical utility than any which had been made by Bostwick before their patent, but it is because

of their greater mechanical skill in adapting his combination of elements to practical use.

"Both tools do the same work in substantially the same way. The changes of McMurray and Hollingsworth were in form only, not in substance. The elements in both were the same and so was their combination.

"This makes it unnecessary to consider any of the patents relied on as anticipations. The tool of McMurray and Hollingsworth is in reality that of Bostwick improved by mechanical skill in its construction, not by invention.

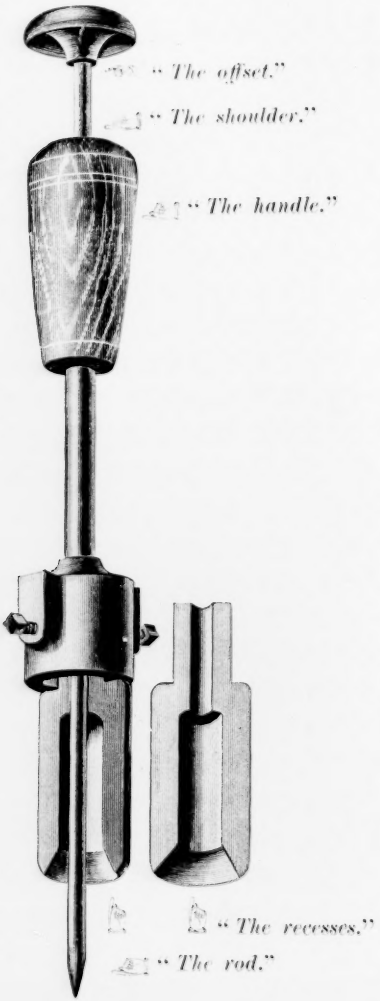
"I find nothing in McMurray *vs.* Mallory, 5 Fed. Rep. 593, to conflict with this. All that case decides is that the Bostwick Patent was not infringed by what was known as the 'Tillery Soldering Tool.' The question in this case is, whether the discovery that by making the soldering iron of Bostwick sufficiently long, the other parts of his tool might be more conveniently arranged for practical use was invention. I think it was not. To use the language of Mr. Justice Swayne in Smith *vs.* Nichols, 21 Wall. 119, it is the 'mere carrying forward—of the original strength, a change only in form, proportions, or degree, the substitution of equivalents, doing substantially the same thing in the same way by substantially the same means with better results, and therefore, 'not such an invention as will sustain a patent.'

"A decree may be prepared dismissing the bill."

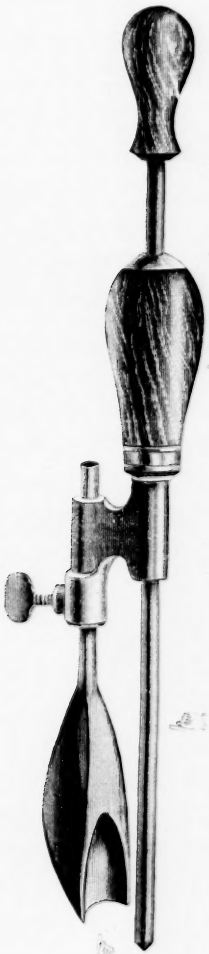
If the Court will look at the wood-cuts of the two apparatuses, the McMurray and Miller, it will be seen that it is only necessary to cut away a part of the soldering iron to have the Tillery tool exact. The Miller tool, as we have said, has its soldering iron formed in two halves, each half held in its place by set screws: by unscrewing one of these set screws, and taking out one of the halves of the iron, we have the Tillery tool; the only difference being that the hollow tube, through which the rod passes, is some two or three inches longer than in the Tillery implement. On the opposite page is a wood cut of the Miller tool with a part of the iron taken out.

"THE MILLER TOOL."

"MADE EXACTLY WITH THE FEATURES OF THE TILLERY, BY DROPPING OUT ONE SIDE OF THE SOLDERING-IRON."



"THE TILLERY IRON."



"The recess B, in the under side to give room for the the convex lid of the can, and confine the soldering process to the outer edge of the lid or can."

Both Ewalt and Tillery saw this soldering iron of McMurray's before getting up their own, and reported the same to Mallory. They simply took the McMurray iron, and split it in two,—absolutely nothing else. If the McMurray iron which covers exact every feature of the Tillery, contains nothing more than the original Bostwick patent, how can it be possible that the Tillery tool can escape the Bostwick?

"It produces substantially the same result in substantially the same way," "melts and distributes the solder by his mode to a greater or less extent around or upon the guiding rod, and the guiding rod assists in conducting the soldering iron to its proper place for soldering, and in holding the cap in position until the soldering was done." The handle, and the shoulder and offset, are there, precisely in the same position, and working in precisely the same manner.

Ewalt and Tillery saw McMurray's iron, cut it in half and took it to Mallory's. Burris was there at work, saw it, went to examine it; Tillery would not let him, but he saw enough. He saw the "lifting rod;" the idea of his old tool came back to him; he saw at once one of the reasons why he had failed; his old tool could not be lifted so as to leave the rod upon the cap to hold it whilst the solder was cooling. "And that was the reason why he condemned it." He went to work at once and made a new tool, this time with a movable rod, and also with a curved iron.

From the history of the case it seems to us clear that the learned Judge of the Circuit Court was wrong in his construction of the original Barker and Bostwick patents, and also wrong in his opinion that these patents were not infringed by the Tillery iron used by defendants.

The learned Judge says, in speaking of the Barker tool; * * "even if the hole for the rod had been made in the centre of the disk, and the handle put to one side, an entire revolution of the disk would not have been really practicable without great changes in every particular of the combination claimed."

Now, it so happens, that the McMurray, the Miller, and the Tillery apparatuses, exhibit exactly the construction contemplated by the learned Judge in the above expression of opinion, viz: the hole for the rod has been made in the centre, and the handle on all sides or surrounding the rod; these tools thus construc ed do not show "*the great changes* in every particular of the combination claimed" in the Barker. That combination exists intact in all of the above mentioned tools. The combination is quoted in the opinion by the learned Judge himself: "The disk *A*, with the recess *B* in the under side, as set forth, in combination with the movable rod or iron D, to hold the lid whilst sealing or closing."

We believe the learned Judge to be also wrong in his views on the Bostwick patent, in defining the scope of its operation to be limited to *projections*, in shape like the cap of a *pill box*. Certainly the mode of operation is not in any way changed by transferring that tool from soldering a high projecting cap to a lower one, the tool itself is in no way altered in its construction; it solders the low cap in precisely the same way that it solders the high one; and we believe the rule of law to be well settled that a patentee is entitled to all the uses to which his invention may be applied. If the opinion of the learned Judge is correct, Bostwick was limited to the use of his soldering tool upon *oil cans*, and his invention could be used by any one without infringement and without change, upon oyster or fruit cans, or upon any other cans, whose cap did not project as high as the oil can caps. This construction would make the gist of the invention to consist in the character of the can and cap to be soldered, and not in the construction and operation of the tool which soldered them.

Further, the learned Judge says:

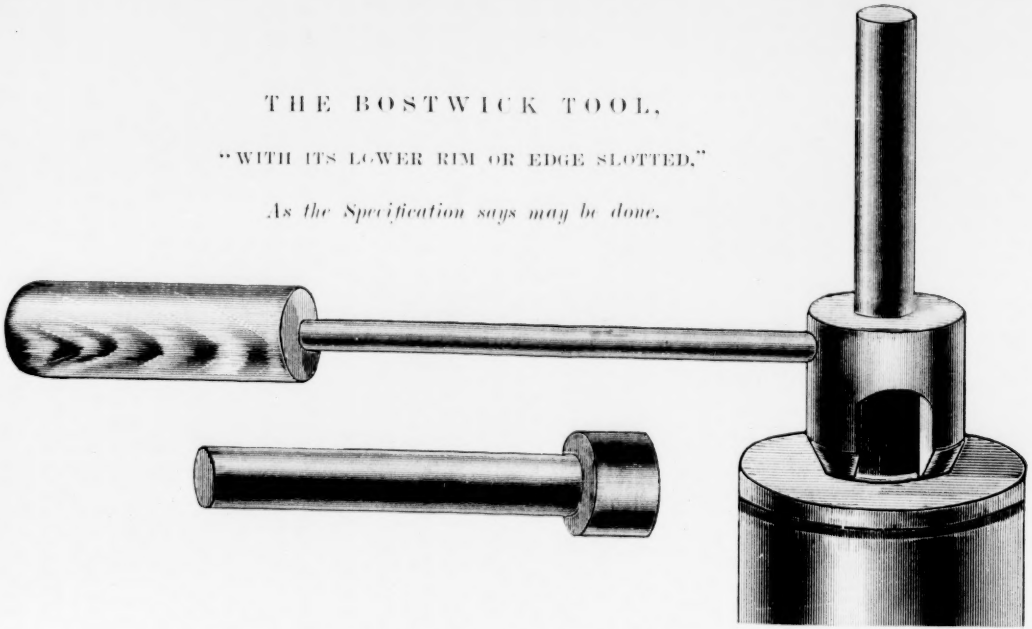
"The turning of the iron on the rod was nowhere suggested and would indeed have been impossible if the rod or iron had been made of any of the shapes suggested, except circular."

The turning of the iron on the rod is *incidental* to the construction of the tool. The handle is there with the hand

THE BOSTWICK TOOL,

"WITH ITS LOWER RIM OR EDGE SLOTTED,"

As the Specification says may be done.



upon it, and we urge with great respect to the learned Judge, that it would be exceedingly hard to resist the turning of this iron by the handle.

This specification says of the soldering iron:

"Its lower rim or edge need not be made continuous, but may be broken or slotted."

The patentee evidently contemplated turning the iron when constructed in this way. On the opposite page is shown a Bostwick tool with the lower edge of the iron "slotted," it would be impossible to solder a can cap with an iron thus constructed without turning it.

We further quote from the Judge's opinion:

. . . . "As the iron was to surround the projecting mouthpiece and cap, they constituted, if circular, a fixed point, and the rod as a pivot was useless."

The views of the learned Judge thus expressed seem to us to be clearly erroneous. Supposing the cap to project some distance into the hollow soldering iron, and in shape something like the cap of a pill box, and the iron were revolving around this cap with the rod pressed upon it, it is evident that the iron must revolve as well around the rod as around the cap, and the apparatus would all the same be working with the iron revolving around the pivotal rod. Now let us take the other extreme and suppose a flat cap were used with the rod in the same position, in that case the *only* pivot would be the rod. We do not insist that the rod *compels* the iron to turn, but *allows* it to turn, offers no obstruction to its turning.

The witness Burris produced by the Defendants, testifies to this under examination by Complainant's counsel. He calls the lower or enlarged end of the Bostwick rod, the "box or cylinder." His testimony on this point is to be found on page 77 of the record and is as follows:

"*6th Re-direct Inter.* Can any even pressure be used upon a circular iron which is worked by a horizontal handle, as seen in Fig. 1 in the Bostwick Original Patent?

"*Ans.* Yes, the pressure on the handle, of course.

"*7th Re-direct Inter.* The question is, whether it is possible for that pressure to be even, the handle being on the side ?

"*Ans.* Yes sir, because the centre rod keeps it straight, it works like *a wheel on an axle.*

"*8th Re-direct Inter.* What do you suppose holds the circular iron in position when worked by the side handle, in the way contemplated by your last answer ?

"*Ans. The box or cylinder on the inside.*"

Amongst other things an effort was made by the defence to prove that the Defendants had no notice, and the Defendant himself is brought upon the stand to swear to this and to prove that Lang had tried to get him to join him in purchasing up these patents in order to get a royalty from other packers. He swears as follows on page 56 of the record.

"*10th Inter.* What, if anything, did Lang ever say to you about buying the Barker and Bostwick Patents, and if he said anything, about what time was it ?

"*Ans.* Some three years since, Mr. Lang wished me to join him in buying up some old capping and soldering patents that were laid aside, with the idea of getting a reissue on them that we might collect a royalty from the other packers."

This is abundantly disproved by all the circumstances of the case. It is in evidence that at the very time this suit was brought, he, Mallory, was contemplating bringing suit against the packers on the Tillery iron, and Lang swears that the above statement is false. Mallory's testimony was taken on the 19th day of February, 1880. Three years before that would be about the first of the year 1877. At that time Lang was the owner of the Barker patent, and four years before that had written to Mallory to notify him he was infringing that patent. The following is his testimony on the subject as it appears on p. 235 of the record.

"*7th Inter.* Mr. Mallory has testified in answer to the 10th Interrogatory-in-chief, propounded to him, that 'some three years ago Mr. Lang wished me to join him in buying up old

capping and soldering Patents, that were laid aside, with the idea of getting a reissue on them, that he might collect a royalty on them from other packers,' please state if this is true?

"*Ans.* There is not any truth in it at all.

"8*th Inter.* At that time, you were the owner of the Barker iron, were you not?

"*Ans.* I was.

"9*th Inter.* Had you given notice to Mallory, prior to that time, that you were the owner of the Barker iron, and intended to prosecute infringements? (Objected to.)

"*Ans.* I had.

"10*th Inter.* Look at the letter-press copy of letter now shown you, already filed and marked 'Mallory Notice, No. 9,' and state from where that copy was taken?

"*Ans.* This was taken from my letter-book?

"11*th Inter.* In whose hand-writing is that?

"*Ans.* Mr. Perez B. Burnham, he is my clerk and my attorney.

"12*th Inter.* Was that letter written and sent in the regular course of business? (Objected to.)

"*Ans.* It was at my request.

"13*th Inter.* Did you about that time or not, send out notices to the trade generally, that you were the owner of the Barker Patent, and intended to prosecute infringers thereof? (Objected to.)

"*Ans.* I did."

The letter-press copy of the notice from Lang to Mallory is to be found on *p.* 186 of the record, in the original the last two or three lines did not copy perfectly. The letter is dated March 23, 1874.

"He told Mallory he wishes to call his attention to patent capping iron, thinks he has control of all irons using centre rod for holding down the cap while soldering cans, and thus adds:

"Have purchased the patent of Abel Barker, of May 17th, 1870, and find that all capping or soldering irons operating

with a centre rod, are an infringment on Barker's Patent; think Ewalt and Tillery iron is an infringement; should be pleased to have you send to Washington and get a copy of Barker's Patent of May 17th, 1870, and judge for yourself; shall proceed with the Barker Patent, and if entitled to priority of the central rod shall exclude all others for using or—"

The rest of the copy is blurred so that it is not legible.

Among other things the defence insisted that the Barker and Bostwick tools would not work, and a variety of reasons are assigned. The Barker iron would not allow the can to vent properly, and the Bostwick could not be adjusted and held properly in place, owing to the location of the handle at the side.

But as witness after witness came up and proved the practical working of both of these irons, the subject-matter was dropped, when thousands of cans were shown to be soldered with such irons, and it was clearly shown that cans such as those made and constructed in France and containing French peas, &c. were all soldered and preserved entirely without any vent-hole at all, and when in addition to this it was clearly shown that the Barker and Bostwick both allowed ample provision for escape of the hot air, and that a vent-hole placed any where in the top of the can answered the purpose just as well as though it were placed in the cap, the defence fell through.

As to the proper steadying and adjusting of the Bostwick tool, one of the witnesses who at first gave his opinion that the tool could not be steadied in place before he had tried it, came back upon the witness stand after practical experience and swore the Barker and Bostwick he believed to be superior to any irons he had ever seen at work.

See testimony of F. J. Ruth, record p. 282.

The truth is that the rod of the Bostwick as sworn to by Burris keeps the tool steady, guides it in the operation and enables a boy to use it as sworn to by Casey on p. 281, of the record.

But as matter of fact the Court will observe that *not a single witness* who came upon the stand to give their opinions on the practical working of these tools, or who swore that they would not perform the work efficiently, had *ever tried either one of them.* They were all of them men who had been raised to believe that the art of soldering was a skilful one, requiring a good deal of knowledge or an apprenticeship to understand, and their knowledge of the art was derived entirely from the difficulties incident to the old straight iron like Exhibit Platt.

We have seen that Mallory was duly notified by letter that he was infringing the Barker Patent in 1874, that in this letter he had been given the name of the inventor, the date and number of the patent, was requested to send to Washington to procure a copy of the patent and to judge for himself; he was also told that the rights claimed by virtue of the Barker Patent would be insisted upon. But he did not stop. We have also seen that both Tillery and Ewalt had seen the McMurray tool, knew its construction, and had reported their knowledge to Mallory.

But in addition to this it seems to us altogether impossible that he could have looked at either the Barker or the Bostwick Patents without seeing that the Tillery tool was a clear infringement. He could easily have obtained both of these patents at the Patent Office and at a nominal expense. Ewalt and Tillery did not pretend to claim in their patent the devices and combinations patented to Barker or Bostwick, those patents were simply limited to special features, and all of them could exist side by side with the Barker and Bostwick, for example—Tillery's first patent granted to Tillery and Ewalt, May 14, 1872, two years after the Barker and Bostwick, and one year after the McMurray, (*pp.* 194, 195, *record*) is intended to secure an adjustible stock and rotary shaft, and the two claims of that patent show for themselves.

"1. The soldering tool *F*, constructed and combined with an adjustible stock *E*, and rotary shaft *c*, as and for the purposes described.

"2. The bifurcated handle and crank gear mechanism, combined with tool and spring rest, as and for the purpose set forth."

The adjustible stock was intended to allow the tool to be used with any size of cap, by adjusting the stock to the size required.

The crank-gear mechanism is nothing more than a revival of the old effort of Weinbrenner.

So with his second patent, May 21st, 1872, shown on pp. 196-197 of the record, which was intended to secure a hole in the end of the rod, to allow an escape of hot air from the vent hole of the cap.

So with his third patent, its object was the same as the first one, to make a provision for radial adjustment of the tool in order as he says, "to adapt the same tool to be used with caps of varying size."

All of these patents, it will be seen by taking the Barker and Bostwick inventions as his guide, were merely intended to make certain additions thereto, which, in his opinion, he thought important. None of them attempt to claim the devices or combinations of either the Barker or Bostwick, but are merely additions to those inventions.

We respectfully ask the Court to say, that the learned Judge below was in error in declaring that the original patents to Barker and Bostwick were not infringed, and to reverse the decree passed by the Court below.

If we are right in our convictions, and have shown that Barker was an original inventor of a soldering implement, consisting of a curved iron and a rod to hold the lid in place during the operation of soldering, the iron constructed to conform to the piece to be soldered, so as to cover it and give room for the convex lid or cap, and confine the soldering process to the outer edge of the lid or cover, and the tool so constructed as to work by holding the lid with the rod, whilst the iron is turned back and forth to spread the solder, and slided up and down upon the rod, whilst the solder is cooling, or whilst being placed in position, and that all the tools used

since, contain these underlying features varied in such ways as mechanics would vary form without varying the substance, and if we are further right, that Bostwick was the first inventor of an implement, which, whilst using the two features of the Barker tool, showed that the rod might be made central and pivotal, our argument would cease here, could we be sure that the Court would follow the precedent in the case of the *Swain Turbine Company vs. Ladd*, and decide no more than the questions raised by the decision of the Court below, from which this appeal is taken. But as it may be the case, that the re-issues will be questioned, we submit the following argument on the subject of

The Re-Issues.

Upon this subject we will take the Barker and Bostwick in their order, and show, as we hope, of the Barker Patent,

1. That upon a fair construction of the original patent everything contained in the Re-issued Patent was legitimately included.
2. That every claim in the re-issue contains the same elements as those in the original, without addition or subtraction.
3. That the words *substantially as described* at the end of every claim, define, limit and point out the true gist of the invention as embodied in the original patent.
4. That several of the claims, if not all, are more limited than the original claim.
5. That the fourth claim, when properly construed, is in terms that of the original.
6. That the fifth claim is the same in exact words, with the exception of such as do not vary or alter its meaning.
7. That the object of the re-issue of the Barker Patent, upon which this suit is brought, was not to enlarge the claim of the original patent, but in reality to restrict and contract the enlargement of the *first* re-issue.

Upon the Bostwick Patent, we will show that the Complainants desire no more than the original patent by filing the disclaimer now a part of the patent, in which all enlargement of the original patent, is disclaimed, and the patent restored to its original form in *totidem verbis*.

The reason for the application for the re-issue of the Barker is well told by the examiners-in-chief in their opinion. See record, pp. 217. "We see no motive in this application, except the *laudable one of making still clearer that which has shown itself in its experience in this office, to be capable of misconstruction, and of getting rid of certain objectionable new matter introduced into the last re-issue.*"

The Barker Patent was re-issued *twice*. The *last* re-issue is the one on which we are suing.

In the first re-issue, the original patent was, probably, enlarged, and new matter inserted.

That re-issue described the rod as going through the centre of the soldering iron, the original patent described it as going through the soldering tool at the side of the handle.

The claim in the original patent introduced the rod as an element in the combination; in the first re-issue, the first claim left out the rod entirely. This would have been a *different invention*, so that the first re-issue would probably have been obnoxious on both grounds, the introduction of new matter, and also a different invention.

When these things were made known, an application was made for the second re-issue, in which the object of the applicant was not to enlarge, but to contract, and to restore the patent to what was fairly shown, and indicated as the real invention in the original patent. And if the applicants have done this, it would seem to be not only a proper course to pursue, but rather a duty to do so.

The Patent Office took this view of it, and so declared in the decision of the examiner-in-chief from whom we have quoted.

The case of *Winans vs. Denmead*, already cited, and which we believe to have been followed ever since as settled

law, lays down the rule of construction, which by a fair interpretation of the Barker original patent, we believe would include in its scope all that is claimed in the re-issue.

In this case, the Court say:

"Its substance is a new operation by means of which a new result is obtained.

"It is this new *mode of operation* which gives it the character of an invention, and entitles the inventor to a patent; and this new mode of operation is, in view of the Patent Law, the thing entitled to protection.

"Now while it is undoubtedly true that the Patentee may so restrict his claim as to cover less than what he invented, or may limit it to one particular form of machine, excluding all other forms, though they also embody his inventions, yet such an interpretation should *not* be put upon his claim, if it can fairly be construed otherwise: and this for two reasons:

"1st. Because the reasonable presumption is, that, having a just right to cover and protect his whole invention, he intended to do so.

"2d. Because specifications are to be construed liberally, in accordance with the designs of the Constitution and the Patent Laws of the United States, to promote the progress of the useful arts, and allow inventors to retain to their own use, not anything which is matter of common right, but what they themselves have created. * * * *

"It is generally true, when a Patentee describes a machine, and claims it as described, that he is understood to intend to claim, and does by law actually cover, not only *the precise forms* he has described, but all other forms, which embody his invention: it being a familiar rule, that to copy the principle or mode of operation, described is an infringement although such copy should be totally unlike the original in form or proportions. * * * * * *

"Patentees sometimes add to their claim an express declaration, to the effect that the claim extends to the thing

patented, however the form or proportions may be varied. But this is unnecessary.

"The law so interprets the claim without the additions of these words * * * * and, therefore, the Patentee having described his invention, and shown its principles, and claimed it in that form which most perfectly embodies it, is, in contemplation of law, deemed to claim every form in which his invention may be copied, unless he manifests an intention to disclaim some of those forms."

The mode of operation remains unchanged; every claim contains the same elements, nothing is added or taken away. New words are introduced, but not to enlarge; they simply describe more aptly the invention. *Draper vs. Potruska Mills*, 13 *O. G.* 276.

It not unfrequently occurs that patentees or their solicitors in the correspondence with the Patent Office, encounter examiners who are not altogether pleasant, and who sometimes reject applications or offer obstructions, which has discouraged and often defeated valuable and meritorious inventions. In the application for this second Barker re-issue, something of this occurred, and the solicitor who made the application was probably quite as hasty and inconsiderate as the examiner.

The examiner's objections seem to be founded upon the words "rotated about the rod," as those words appear in the first two claims of the re-issue. There was really no reason why the examiner should have objected to these words, nor indeed was there any reason why the solicitor should not have erased them. They add nothing to the gist of the invention; had the words used been "*turned back and forth in contact with the solder*," both of those claims would have been stronger, and would have been in exact terms the language of the original specifications, in describing the mode of operation of the apparatus.

The solicitor, however, sends the examiner a model of the Barker tool, and tells him that "the disk will make *two* com-

plete revolutions about the rod," and adds, "an ocular demonstration ought to dispose of a theoretical objection."

The examiner loses his temper and insists upon his objections, and says the new matter consists in the statement that the tool *revolved* at all.

It will be seen that no such statement ever was made in the specification or claim of the re-issued patent. The solicitor desiring to show the examiner that the tool would *rotate*, sent him a model which would do more; it would *revolve;* make two revolutions. An appeal was then taken to the examiners-in-chief, who, in their opinion, place the matter in its true light. We quote from their decision the portion to which we refer, as follows:

"There is no difficulty in the turning back and forth, as the examiner seems to fancy. The human hand may be turned back and forth through nearly an entire revolution, by reason of a similar mechanism—the radius and ulna—an amount of angular motion *abundantly sufficient* for applicant's purpose, and properly characterized as *rotary;* the term 'rotated' like 'turned,' (the one originally used,) not necessarily in common parlance, calling for continuous revolution, but merely indicating motion about a fixed point.

"We regard the hypothesis and the diagram of the examiner as far-fetched and violent, and having no warrant in anything found in the original patent. Had *applicant* endeavored to introduce such a theory, supporting it by such a departure from the original description, as the change of the specific word 'turned' into 'moved,' he would have justly laid himself open to the strictures of the examiner, as to 'new matter.'"

The learned Judge below also seemed to understand the word *rotate* to mean *revolve*, but every one at all acquainted with the terms commonly used in shop parlance, knows that the word *rotate* finds its most common meaning in a turning back and forth in the line of a circle.

The patentees, however, accepted the reissued patent with this meaning attached to it, as this was the meaning given to it by the examiners in granting the application.

Besides this, the 1st and 2nd claims themselves would have this interpretation given to them. For example, "arranged to be rotated about it substantially as described." How described? The language of the specification in both original and reissue are identical. "The heated disk or iron is then pushed down in contact with the solder or sealing material until it is melted, and then *turned back and forth*, until the solder is spread evenly around the cover. The disk is then to be withdrawn with the rod still pressed upon the lid until the solder or sealing material sets or hardens."

We have said that a liberal construction of this patent show all of the claims to be included in the terms of the original patent. Now, the claim in the original patent is as follows:

"The disk A, with the recess B in the under side, as set forth, in combination with the movable rod or wire D to hold the lid while resealing or closing"

The first claim of the re-issue—

"In a soldering machine, a rod adapted to hold the can, cap or lid in place in combination with a soldering iron mounted upon and arranged to be rotated about said rod *substantially as described.*"

The words underscored certainly refer to the whole description. The rod to hold the lid is certainly the same in both claims. The soldering iron is the same, viz: a soldering iron large enough to cover the cap with, with a recess to give room for the cover and confine the soldering process to the outer edge of the lid or cover.

Giving to the word "rotate" the meaning of "turned back and forth" it would seem clear that if the rod holds the lid "while resealing or closing," it would hold it during the whole operation of soldering, which would include the time it was being rotated or turned back and forth.

The second claim is the same as the first, except that the function of the iron is therein given as *sliding upon and* adapted to be rotated about it.

The third claim is as follows:

"In combination with a soldering tool or die the rod *D*, passing through said tool or die to hold the can, cap or lid in the process of soldering substantially as described."

Here are again the same two parts in combination, with the words passing through the tool or die added as descriptive "to hold the can, cap or lid in the process of soldering," can hardly be an expansion of the words in the original claim "to hold the lid while resealing or closing." The words substantially as described define the character of the soldering iron. There is certainly no enlargement of the invention here.

The 4th claim.

"In a soldering machine, the combination, with a soldering tool conforming in shape to the cap to be soldered, of an independently movable rod *D*, upon which said tool is mounted substantially as described."

The words "*conforming in shape to the cap to be soldered*," taken in connection with the words "*substantially as described*" at the end of the claim, and construed in the light of the specification can hardly be meant to cover more than the original patent. A round cap on a can would require a curved iron, an iron "large enough to cover the cap, with a recess in its under side to give room for the convex lid of the can, and confine the soldering process to the outer edge of the lid or cover." Such an iron would conform in shape to the cap to be soldered, and give an apt expression to the language of the specification describing this iron.

The word "*independently*" movable, was suggested by the examiner as a limiting word. In his letter to the solicitor he cites an English patent as a reference to the 4th and 5th claims, and adds immediately: "Applicant may avoid the English patent by inserting 'independently movable'

before 'rod' in the 4th claim, and '*independently*' before movable in the 5th claim.'

The solicitor inserted the words as suggested by the examiner.

So the words "*mounted upon*," are limiting words; they mean only that the two parts are worked together; when the rod is placed upon the cap, the soldering iron is worked in conjunction therewith, it is *mounted* upon the rod, as it slides upon it in being "pushed down in contact with the solder," it is still mounted upon it in being drawn away when the rod is holding the cap to let the solder cool; these words can hardly be said to enlarge or vary the invention; they are merely descriptive, and if they have any effect it would be to limit and restrict the claim.

The *5th claim* of the reissue we will place side by side with the claim in the original patent.

ORIGINAL.	RE-ISSUE 5TH CLAIM.
"The disk A, with the recess B in the under side as set forth in combination with the movable rod or wire D, to hold the lid while resealing or closing."	"The disk or tool A, with the recess B in its under side, in combination with and mounted upon the independently ~~im~~movable rod or wire D, as set forth."

Upon the whole, a liberal construction of the Barker invention, we believe would include all that is described or claimed in the re-issued patent.

THE BOSTWICK.

Section 4,917 of the Revised Statutes enacts as follows:

"Wherever through inadvertence, accident or mistake, and without any fraudulent or deceptive intention, a patentee has claimed more than that of which he was the original and first inventor or discoverer, his patent shall be valid for all

that part which is truly and justly his own, provided the same is a material and substantial part of the thing patented, and any such patentee, his heirs or assigns, whether of the whole or any sectional interest therein, may on payment of the fee required by law, make disclaimer of such parts of the thing patented as he shall not choose to claim or hold, by virtue of the patent or assignments, stating therein the extent of his interest in such patent. Such disclaimer shall be in writing, attested by one or more witnesses, and recorded in the Patent Office; and it shall thereafter be considered as part of the original specification to the extent of the interest possessed by claimant, and by those claiming under him after the record thereof. But no such disclaimer shall affect any action pending at the time of its being filed, except so far as may relate to the question of unreasonable neglect or delay in filing it."

The Complainants having complied with the requirement of law, filed in the Patent Office, on the 25th day of September, 1883, the following disclaimer. . . . . "Your petitioners do not choose to claim or hold by virtue of said reissued patent and assignment any part of said patented improvement which is not truly and justly the invention of said Jabez A. Bostwick and described and claimed in his original patent.

"Your petitioners, therefore, hereby enter their disclaimer to all parts of the thing patented, which are or may be construed to be broader or more comprehensive than the invention as described, shown and claimed in the original patent issued to the said Jabez A. Bostwick, on the 21st day of June, 1870, and numbered 104,412.

"They hereby disclaim all words, phrases, and sentences introduced in the specification, which may mean or may be construed to contain any other or different invention than that justly belonging to the inventor and fairly included in the invention as originally described and claimed.

"They disclaim all meaning or construction of the first claim, except such parts as are therein mentioned, when con-

strued to mean a hollow soldering iron, having a handle B, and beveled rim *a*, *a*, fully described and set forth in the specification and claim of the original patent, and operating as therein described.

"They further disclaim all meaning or construction of the second claim of said re-issued patent, except when the hollow soldering iron therein mentioned is constructed with the beveled rim *a*, *a*, and is provided with the handle B, as set forth in the specification and claim of the original patent, and operating substantially as therein described, and desire that said re-issued patent, when the disclaimed matter is cancelled, will read as follows:"

Then follows the entire original specification and claim, as given on pp. 37, 38 and 39 of the record.

This disclaimer under the section of law above quoted, has become a part of the original patent.

This Court in the very recent case, declared this law to be applicable to re-issued, as well as to original patents.

Herring vs. Gage, 23 *O. G.* 2119.

We believe it to be capable of demonstration, that both the Barker and Bostwick original patents were good and valid patents, and were infringed by the Defendants; that Barker was the first and original inventor of the underlying features of the apparatus, as described in his patent; that Bostwick's improvement thereon, was also a meritorious invention equally infringed by the Defendants' apparatus.

Both of these tools are of great utility, nothing like either of them had ever been known or used before, that no patent or printed publication has been shown, which could deprive either of these inventors of the merit due them, of giving to the world practically, a tool which has superseded all others to the great benefit of the trade in diminishing the cost of their manufacture, and of the public who pay less in consequence for the goods; that the abandoned experiments conclusively show the difficulty of making these implements,

which simple as they are, wore out the patience of workmen engaged in the effort to invent them. And if the Court shall pass at all upon the re-issued patents: that there is nothing more in the Barker, than what was fairly described as his invention in his original patent; that the Bostwick is restored in words, meaning and intent to the original, by the disclaimer which has become a part of the patent.

We respectfully ask that the ruling below be reversed.

And as in duty bound, &c.

BENJ. PRICE,

For Appellants.

In the Supreme Court of the United States.

OCTOBER TERM, 1883. No. 250.

Appeal from the U. S. Circuit Court, Fourth Circuit and District of Maryland.

McMURRAY, et al.

vs.

MALLORY, et al.

STATEMENT AND POINTS FOR APPELLEES.
(THE DEFENDANTS BELOW.)

SEBASTIAN BROWN,
ROBT. H. SMITH,
Solicitors for Defendants.

In the Supreme Court of the United States.

OCTOBER TERM, 1883, No. 250.

Appeal from the U. S. Circuit Court, Fourth Circuit and District of Maryland.

McMURRAY, et al.

vs.

MALLORY, et al.

STATEMENT AND POINTS FOR APPELLEES,
(THE DEFENDANTS BELOW.)

THIS suit was instituted for the purpose of restraining the Defendants from using a soldering device known as the Ewalt & Tillery Iron. Complainants' "Ewalt & Tillery model" is one of the irons. The bill also asks for an account of the profits. The iron was invented and patented in 1872, and has been in general use since that time by the Defendants, and most of the oyster packers in Baltimore City. The iron is very valuable to the trade. It saves time and solder, and does the work more neatly and better than all other irons. The invention was a success. Prior to this invention oyster cans had been capped by what is termed the old straight iron, represented by "Exhibit Platt." Owing to the demands of the trade, many soldering irons were invented, and some patented in 1872, but with the exception of McMurray's device, used exclusively by himself, the trade at once adopted and has continuously used the Ewalt &

Tillery. Without great injury to the trade it could not now be dispensed with. The bill was dismissed and Complainants appealed.

It is claimed by the bill that this iron infringes the Patents of Abel Barker and Jabez A. Bostwick, granted May 17th, 1870, and June 21st, 1870, respectively. Two re-issues were granted on the Barker Patent, the first on January 11th, 1876, and the second on July 1st, 1879; and on the 29th day of October, 1878, a re-issue was granted on the Bostwick Patent.

I.

Assuming that the Ewalt & Tillery Iron is an infringement on the Barker and the Bostwick, still, under the facts of this case, the law will presume that the patentees and their assigns have abandoned their rights to the public. Barker, when he obtained the Patent, was and still is a resident of Central Pennsylvania, where no packing is done. A reference to the original letters will show that he had no idea of superseding any known method of hermetically sealing canned goods. He knew that goods were hermetically sealed, and when so sealed, were sold in the market; and he invented a device to unseal and reseal a cap that had been previously hermetically sealed. He aimed to facilitate housekeepers and nothing more. Bostwick, as will be seen by his testimony, and as will also appear by reference to his patent, invented his device for the purpose of capping oil cans. He was a dealer in oil, and up to the time his testimony was taken in this case, had never seen an oyster can capped, and he knew nothing about the process. No oyster packer, knowing the facts, could have assumed that these devices were intended for use in his trade. Nearly ten years had elapsed before any suit was brought and during that period neither a Barker nor Bostwick iron was made, sold or used. McMurray claims to have used the Barker iron in 1871-2, but the iron, according to his own testimony, was not the Barker.—McMurray, pp. 49-50.

The patentees and their assigns slumbered on their rights, if they had any, for it is not even alleged, as it could not be in fact, that they were unable to put their device on the market, or to prosecute infringers. To their knowledge, since 1872, the Ewalt & Tillery iron was being constantly used. Lang, one of the Complainants, was a manufacturer of solder, and knowing that his solder could be used advantageously with the Ewalt & Tillery

iron, he accompanied the patentees to Washington for the purpose of assisting them to procure a patent, and introduce them to the lawyer who prepared the application. Nor does he stop here. He prevails on the Defendants and other leading packers in the trade to buy the iron *in order that he might sell his solder.*

Lang, p. 235, 14 Ans. Mallory, pp. 55–6, 6 to 11 Ans.
Platt, p. 65, 4 Ans. Day, pp. 63–4, 5 and 6 Ans.

They buy the iron and they buy his solder. In the course of time the iron has become one of the most important adjuncts to a leading industry of the State of Maryland. D. D. Mallory, one of the Defendants, employed Tillery to invent the iron, paid him for his time, and in addition to this a one-third interest in the iron cost him $1950.

Mallory, p. 58, 15 to 17 X Ans.

Lang tried to persuade Mallory to unite with him and buy up old Patents for soldering, presumably the Patents of Barker and Bostwick. Mallory declines.

Mallory, p. 56, 10 Ans.

He then for a trifling consideration made the purchase himself. He gives $500 to Bostwick, and though McMurray says he learned that the Barker cost $1800, there is no evidence of its cost in the record, unless the assignment expresses the correct consideration. But the claims in their original form will not cover the Ewalt and Tillery iron. He gets a re-issue on the Barker, but the claims are still unsatisfactory. He then procures a second re-issue on the Barker and a re-issue on the Bostwick, and the claims are made broad enough to cover the iron of Defendants. The next step is to form a copartnership with McMurray and Burnham, and this suit is instituted as a test case.

Upon facts of a far less serious character than those above detailed, Courts have refused to grant an injunction even where the question of infringement was practically conceded.

Pitts *vs.* Hall, 2 Blatchford, 237–8.
The United States Rifle and Cartridge Co. *vs.* The Whitney Arms Co., 14 Blatchford, 101.
Pyeth *vs.* Stone, 1 Story, 281.
Rundell *vs.* Murray, Jacobs' Chancery, 316.
Saunders *vs.* Smith, 3 Mylne & Craig, 730.

II.

There is nothing new, novel or patentable in either the invention of Barker or Bostwick. The claims are for a combination of the disc and rod in the one case, and of the disc and weight in the other. Neither one is claimed separately, and could not be, for the constituent parts of both inventions are old.

R. D. Williams, an expert, called for complainants, p. 303, 9x, 12x; p. 304, 17x.
Faust, Exhibit, p. 229.
Casey, Exhibit.
Exhibit, Centre Rod.
Casey, p. 122, 40x.
Casey, p. 116, 3, 4 and 11 Ans.
Exhibit, Carson, p. 225.
Jones, p. 82, 39 and 40 Ans.

If a claim had been made for the constituent parts of these inventions, the Court could take judicial notice of the fact that they were old and in common use, and pronounce them void.

Terhune *vs.* Philips, 9 Otto, 592.

A combination of old devices must not only be new and useful, but a new result must be obtained, and not an aggregation of old results.

Hailes *vs.* Van Wormer, 20 Wal., 368.
Glue Co. *vs.* Upton, 7 Otto, 6.
Rubber Co. *vs.* Welling, 7 Otto, 12.
Rechenderfer *vs.* Faber, 2 Otto, 356–8.

We submit that no new result has been obtained by either Barker or Bostwick, and that the devices show no mechanical principle, and only a *quasi* combination.

Of all the witnesses produced in this case, John T. Jones and William D. Brooks are by training and experience the best qualified to pronounce an opinion on these devices. The first is an educated as well as a practical machinist, and the second is a practical can-capper, and has made the subject of soldering irons a special study. They pronounce the devices impracticable, and give it as their opinion that the combinations produce no new result.

J. T. Jones, pp. 78 to 84.
W. D. Brooks, pp. 94, 95, 96, 97.

These views are scarcely weakened by the testimony of Mr. Williams, the Complainants' expert, pp. 303 to 306.

An examination of the devices J. T. Jones, No. 2, and J. T. Jones, the Barker and Bostwick irons respectively, will disclose that they produce simply "an aggregation of results."

(1.) The Barker consists of a circular soldering iron, fitting the crease to be soldered. This iron is neither patented nor patentable. It has a movable rod running through the device near the centre, and connected with the handle near the top. This rod is neither patented nor patentable. A rod or weight to hold the cap down has long been used. It performs no new function, and produces no new result by being connected to the handle of the iron. Detach it and hold it by the hand during the process of soldering, and precisely the same result in every particular will be produced.

(2.) The Bostwick consists of a hollow soldering iron, fitting the crease to be soldered, and an enclosed separate weight or rod of the size of the cap to be soldered. Neither one is new or patentable *per se*. There is not even the semblance of a combination in this device, and no new result is obtained.

There may be some convenience in having the iron and the rod attached together in the Barker invention, but such attachment is not the subject of a patent.

Faber Case, 2 Otto, 356–8.
Slawson *vs.* Grand Street R. R. Co. 107 U. S., 652–3–4.

III.

The re-issues contain claims not shown nor contemplated by the original drawings and specifications, and the patents are therefore void. A re-issue must be restricted to what is shown by the original, otherwise a patentee will get the benefit of subsequent inventions.

Powder Co. *vs.* Powder Works, 8 Otto, 138–9.
Miller *vs.* Brass Co., 104 U. S., 350.
Moffitt *vs.* Rogers, 106 U. S., 423.
Wing *vs.* Anthony, 106 U. S., 142.
Gosling *vs.* Roberts, 106 U. S., 39.
Gage *vs.* Herring, 107 U. S., 640.

Upon this point we refer the Court to the testimony of Ellis Spear, an ex-commissioner of patents, and a gentleman well versed in patentable devices.

See pp. 154-157. His views cannot readily be digested here, and we will simply advert to the subject in general terms.

(1.) The Barker second re-issue (1 and 2 claims,) claims that the soldering tool or disc *rotates* about the side rod. This is neither claimed nor shown by the original patent, and the device constructed according to the patent does not operate as claimed. This question was raised in the Patent Office before the re-issue, and the examiner disallowed the claims, but the board of review overruled him. The examiner's ruling and his reasons are the more satisfactory. These claims cover, and possibly were intended to cover, the Ewalt & Tillery iron.

An inspection of the Barker device will show that the iron does not rotate about the rod. If the rod works loosely in the iron, the latter can be worked back and forth to a limited extent, while the rod is held down by the hand. If the rod is a flexible wire, then the iron may be turned nearly in a complete circle, but in that case, the iron necessarily passes out of the crease, and fails to perform its functions. Rotate is derived from the Latin word *rotare*, and means to *turn round as a wheel*.

A simple test will serve to shew that the Barker iron does not rotate about the side rod. *It must be conceded that a circular iron cannot rotate about two separate fixed points at the same time.*

Conceive the handle of the Barker iron to be a movable rod running through the iron and resting on the cap, while the side rod remains as constructed. Attach to the circular disc a side handle like that on the Bostwick Patent. Operating with the device thus constructed, the circular iron will certainly rotate about the centre rod, and it will make the same motion with reference to the side rod as if the centre rod was firmly attached to the iron. Hence, if the iron rotates about the side rod it rotates about two separate fixed points at the same time.

(2.) The Bostwick re-issue, both in its specifications and first claim, sets forth that the soldering iron revolves "about a central pivotal rod."

This language covers the Ewalt and Tillery device, but does not correctly describe the Bostwick. The centre weight does not act as a pivot, and the iron can be revolved as well without as with the enclosed weight.

A pivot, according to the authorities, is a pin or shaft *on which* anything turns.

It is clear that the iron does not turn *on* the enclosed weight.

The centre rod of the Ewalt & Tillery device guides the soldering iron to its position in the crease. The Bostwick re-issue says "the central rod thus serves . . . . . as a guide to conduct the heated iron directly to the joint," and "to limit and guide the soldering iron in its proper movement during the process of soldering."

The circular soldering iron serves as a guide to the rod instead of the rod serving as a guide to the iron.

W. D. Brooks, pp. 94 to 98.

Ellis Spear, pp. 155–156, 6 and 7 Ans.

The Bostwick device was patented to cap oil cans, and it is clear from the description contained in the original Patent that the inventor's idea of capping was not to turn or revolve the iron, but simply to let it remain stationary on the crease until the solder was melted.

The original Patent makes no allusion to a pivotal rod nor to a revolution of the iron.

IV.

The devices are wanting in utility, and the Complainants for that reason cannot maintain their bill.

Rechendorfer *vs.* Faber, 2 Otto, 348.

It is not claimed that they will not cap cans. A can may be capped with a heated iron of any shape.

W. D. Brooks, p. 97, 21 Ans.

The utility of an invention is determined not alone by the fact that it will to some extent do the work for which it was invented, but also by its practicability.

A soldering tool that would cap no more cans than the old straight iron, and, at the same time, would consume twice as much labor and solder, would be neither practicable nor useful.

The devices though invented and patented for ten years are not in practical use. This of itself is strong evidence that they are wanting in utility.

The following are some of the reasons why they have not been and cannot be used.

(1.) They have no means of venting the can during the process of capping, and the can will "blow."

(2.) The soldering iron cannot receive a flexible pressure of the hand.

(3.) They consume too much solder.

(4.) You cannot see how the operation is progressing during the process of capping.

(5.) The side rod and centre weight become heated, and tend to deface as well as to withdraw the cap.

(6.) No sufficient means are provided for holding the cap in place during the process of capping.

(7.) Neither the side rod nor the centre weight are capable of being, nor were intended to be held by the hand during the process.

(8.) They cannot be operated rapidly.

(9.) They will melt the head of square cans.

W. D. Brooks, pp. 94 and 96, 8 ans. and 15 ans.
J. T. Jones, pp. 78 to 82.
John Casey, pp. 117–118.
Francis J. Ruth, pp. 125 to 127.
J. H. Burris, pp. 69 to 72.

After the testimony of the above witnesses was taken, and never until then since the Patents were granted, the devices were constructed and tested.

The persons who witnessed the test, among whom were Casey and Ruth, two of Defendants' witnesses, testify that the devices did as good work as the Ewalt & Tillery. Casey and Ruth were invited, but the counsel for Defendants were not notified, nor were Brooks and Jones, the two scientific as well as practical men, called by Defendants. Particular attention is called to the testimony of the persons who made and witnessed this test.

Geo. W. Floyd, p. 265, &c.
T. H. Coakley, p. 274, &c.
John Casey, p. 280, &c.
F. J. Ruth, p. 281, &c.
Frank Goode, p. 310, &c.

The test leaves it doubtful whether the oysters were really cooked, and whether the cans were full. But the test proved too much to be reliable. It demonstrated that you can cap as well without as with a vent.

Coakley, p. 276.

This is not only contrary to all the rest of the testimony in the case, but it is contrary to all experience. Every packer in the city uses a vent—and the Complainants, who profess to believe that the vent in the Ewalt & Tillery Patent is the only essential thing about it, have since the commencement of this suit purchased an interest in that Patent. If the vent is not necessary, and the combination of the Ewalt & Tillery device is an infringement why would Complainants make the purchase?

But no single test, however satisfactory, can demonstrate the utility of any Patent. Edison kept his electric lights burning for months, but unforseen difficulties arose which prevented for a time the practical use of his invention in lighting up large cities.

McMurray has a device operated with a centre rod, and which is very different from the Barker or Bostwick. To prove its utility he showed by his foreman that since 1875 no reclamation had been made on account of cans being insecurely capped.

W. P. Herbert, pp. 290–1.

This is a test and the only correct one.

McMurray's device is confessedly better than either the Barker or Bostwick, and yet for reasons unexplained, he, in 1879, for a short time, fell back on the old straight iron.

Herbert, pp. 290–1.

V.

Assuming, as we do not admit, that Barker and Bostwick have a combination, we further contend that Barker and Bostwick are not the first and original inventors.

Being misled by Tillery & Ewalt, Defendants had expected to prove that the iron used by them had been invented and used prior to those of Complainants, but that point is abandoned. While Defendants supposed that Ewalt & Tillery were working up the case for them, they were confessedly in the interest of Complainants. After telling the Defendants and their counsel that their device antedated all others, Tillery comes on the stand at the request of the Complainants and swears that this statement was all a lie. They both even swore that they copied their invention from one of McMurray's irons, but upon close cross-examination, Ewalt had to admit, 11x, p. 286, that their model was completed before Tillery saw the iron of McMurray. Ewalt, while in the pay of McMurray, was in communication with Defendants'

counsel and with Defendants, hunting up irons for them, and explaining the art of soldering. Tillery gives to the counsel of Defendants the names of witnesses to prove prior use, and then as a witness for Complainants swears that he knew the witnesses could prove nothing when he gave their names. In order that their motives may be understood, we refer to their testimony, p. 249, &c., and p. 285, &c., and especially to Tillery's letters, pp. 176–7.

(1.) The soldering iron and rod in combination was used and patented by Gray long prior to 1870.

See the Gray Patent, marked Exhibit "Hay," p. 200.

Here is the perfect combination of the rod to hold the cap down in combination with the soldering iron. The difference is that in the Gray Patent the can revolves. But if the merit of the invention is in the combination, it is immaterial whether the can or the iron revolves.

Machine Co. *vs.* Murray, 7 Otto, 122–5.

(2.) James H. Burris, of Baltimore, in 1863–4, invented a device having the combination. It worked on the principle of the carpenter's brace. He capped many cans with it, but owing to the absence of a vent the work was not well done, and he ceased to use it. In 1872 he chanced to see the Tillery vent and he took up his old invention, and made and sold many of his irons.

Pp. 67 to 70 and 109 to 111.

(3.) In 1864, Charles E. Hall, of Baltimore, invented a device having the combination which he used and sold. It did not work well for want of a vent. He has kept on improving the invention up to the present time.

Pp. 144–151, and Exhibits, Chas. E. Hall, Nos. 1 to 5; p. 204, &c.

(4.) In 1869, Henry C. Weinbrenner, then of Baltimore, invented a device with the combination. It was used by several persons, but for want of a vent did not work well.

Samuel King, pp. 131–2.

William Steiner, p. 135.

These devices did not go into practical use for one of the reasons that the Barker and Bostwick, are not practicable—they had no vent.

(5.) In 1868, William Faust, of Pittsburg, invented a circular iron for opening and sealing cans, and applied for a patent, which was rejected. He made, sold and gave away, prior to 1870, great numbers of the irons. It has no rod in combination, but if a cap was to be soldered, a party could scarcely claim a patent for taking a rod in his left hand and holding the cap down. And yet this mode of operating it would present a device, having all the material elements of the Barker and Bostwick.

William Faust, pp. 152 to 154, and Exhibits Faust Patent and Faust Tool, p. 228, &c.

While it is true that if a person invents a machine which is not patented and never goes into public use, and another person invents the same machine and gets it patented, the patent, in the absence of fraud, is good; still, if a person invents a machine which is not used because of a defect, and another person invents the same machine with the same defect, and the latter though patented does not go into public use, the first inventor cannot be proceeded against as an infringer.

But the inventions of Burris and Hall stand on a stronger footing than is presented by the above proposition. While the patents of Barker and Bostwick lay dormant, they perfect their devices by the introduction of a vent, and put them on sale and in public use; and before the inventions of Barker and Bostwick, the Burris and Hall devices were publicly used, and seen by great numbers of people. Surely, under these circumstances, a Court would not grant an injunction against these first inventors, if it would not against them, the Defendants are equally protected.

VI.

The Ewalt & Tillery iron does not infringe the Barker nor the Bostwick. An examination of the three devices will show this, and it is the opinion likewise of three able experts.

Ellis Spear, p. 156–7.
W. D. Brooks, p. 98–99.
John T. Jones, p. 82.

Experts however, will differ, and the Complainants called two very estimable gentlemen, who "disagree" with Mr. Spear.

R. D. Williams, p. 294–5, 3 Ans.
W. C. Wood, p. 319, 5 and 6 Ans.

We submit with more than ordinary confidence, that neither of these witnesses has shown clearly what is infringed upon. The re-issue claims, or at least some of them, are infringed, it is easy to show, but are the devices infringed? Mr. Williams is positive that the devices are infringed, and in order to give that opinion, he ought to know what features of the Bostwick, and what features of the Barker are infringed. But he leaves us in doubt whether the Bostwick infringes the Barker. He says, p. 302, 1 to 7 X-Ans. that the Bostwick infringes all five claims of the Barker, and on pp. 303 to 305, he says, the Bostwick does not infringe the Barker. On p. 304, he says, the second claim of the Bostwick "is laid to cover the combination of a hollow iron, with a separate enclosed weight for steadying the cap. This I consider patentable, notwithstanding the existence of the Barker patent." In his 15th X-Ans., same page, he says, that if he said the Bostwick infringed, it was a *lapsus linguae*, and in the same paragraph, he adds, "that the device made according to the Bostwick patent, is an infringement of the Barker patent." If Mr. Williams could not tell, as he plainly could not, whether Bostwick infringed the Barker, we must receive his opinion on the Ewalt & Tillery with considerable caution.

Mr. Wood was occupied chiefly in explaining the claims of the different patents. His 15th answer, p. 322, however, taken as a whole, tacitly admits that there is a radical difference between the Ewalt & Tillery and the Barker and Bostwick. The former device, he says, because of its peculiar construction, "possesses great practical value." The Ewalt & Tillery iron "has a central rod, by means of which the cap can be held closer, while the iron is rotated about it, and which at the same time serves as a central pivot upon which the soldering iron is turned and guided."

Spear, p. 156.

These features are not shown in the Barker and Bostwick.

Spear, p. 155-56.

If a certain form be necessary to successful operation, then the form is material, and a device differing in form is not an infringement.

Warner *vs.* King, 6 Otto, 230.

The slightest examination will show that neither of the two devices can be successfully operated with the segment of a circle,

if indeed they could be operated at all. The Ewalt & Tillery device is totally different in form from the devices of Complainants, and it is not an infringement.

Burns *vs.* Meyer, 10 Otto, 672.

All of the soldering irons now in use—and as appears from the testimony there are numbers of them—have been invented step by step, and each patentee or inventor can only claim "his own form of device," unless the form is the substance of the invention. Such is the law as recently decided by the Supreme Court, and the principle is peculiarly applicable to if not of controlling influence upon the merits of this controversy.

Railway Co. *vs.* Sayles, 7 Otto, 556–7.

On the question of infringement, apart from the other defences relied upon, we refer to the decision of Judge Morris, p. 334 to 338.

SEBASTIAN BROWN,
ROBT. H. SMITH,
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